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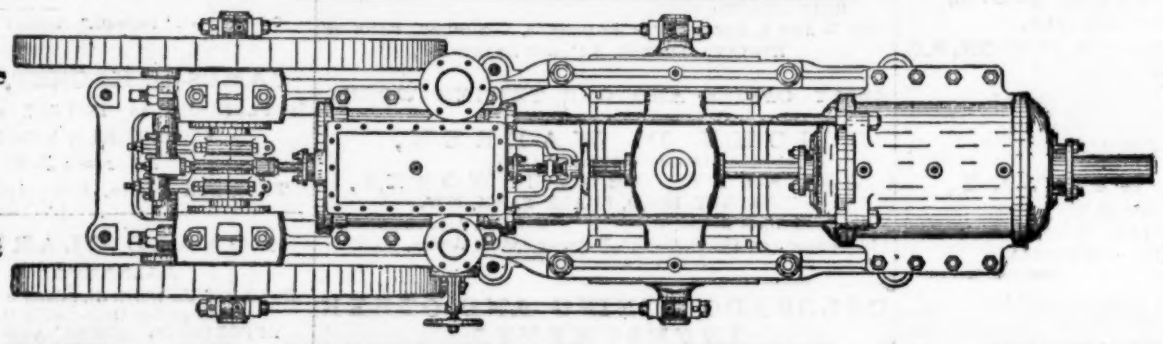

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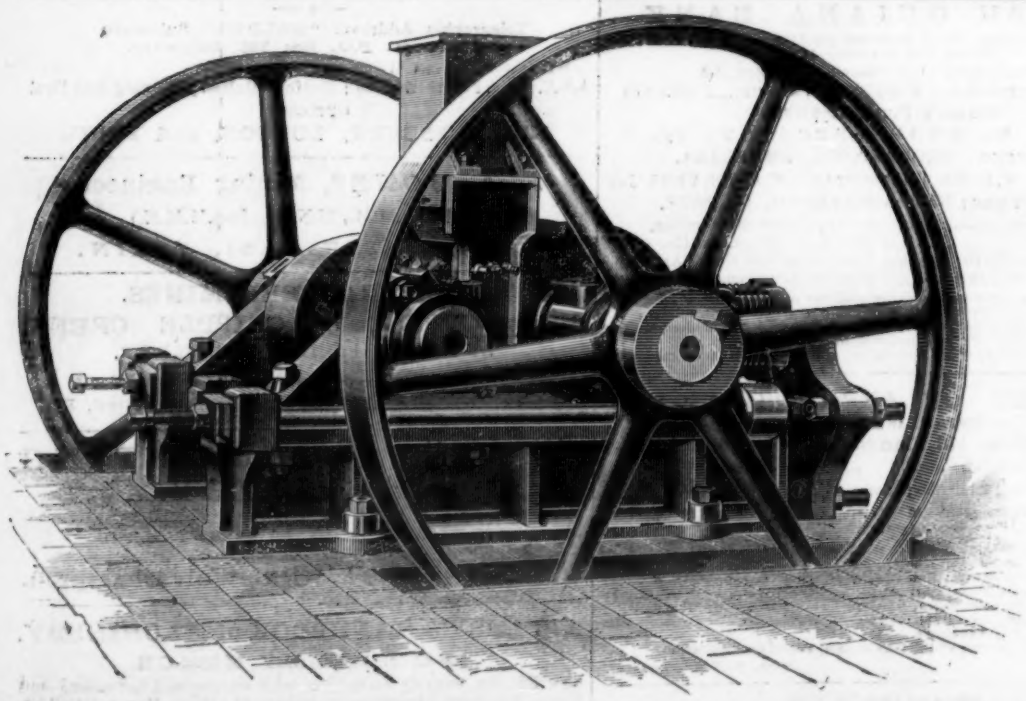

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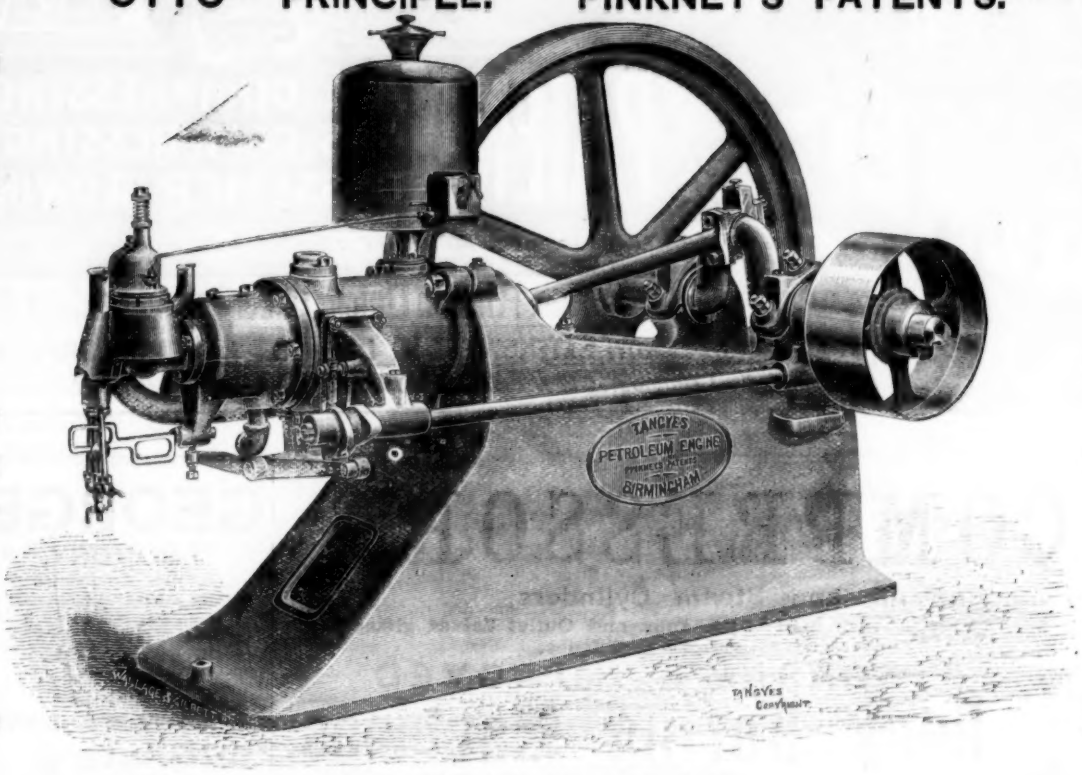

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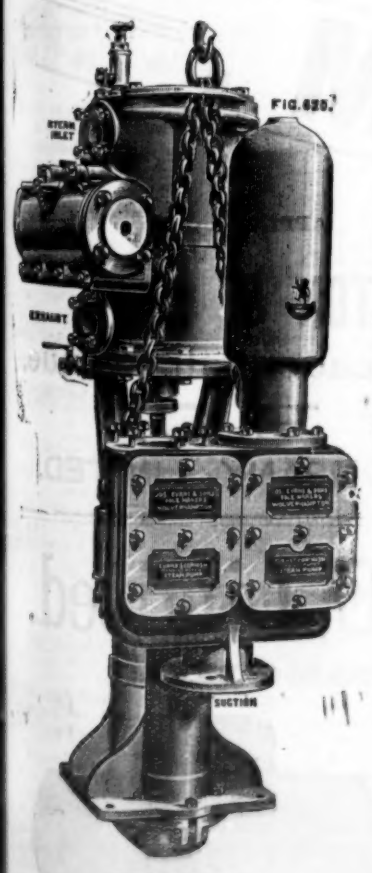

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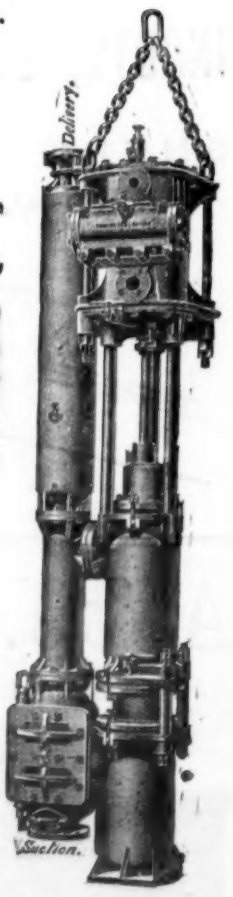

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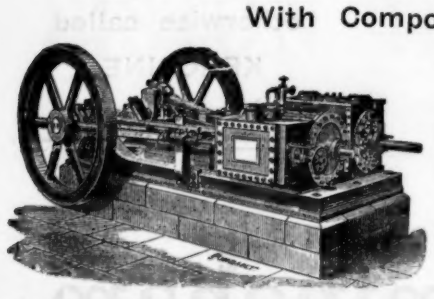
Fisher & Walkers' Patent Friction Clutch & Underground Haulage Machinery
THIS GEARING IS NOW EXTENSIVELY IN USE FOR HAULAGE PURPOSES.
The objects attained are SIMPLICITY, ENDURANCE OF THE MACHINERY AND ROPES with a MINIMUM EXPENDITURE OF POWER.

AIR COMPRESSORS
With Compound Air and Steam Cylinders,
Fitted with SCHRAM'S Inlet and Outlet Valves giving the greatest efficiency.



SCHRAM'S IMPROVED
Rock Boring Machines.
Supplied to the Indian, Colonial, and other Governments.
2500 IN USE in all PARTS of the WORLD.
DIAMOND PROSPECTING DRILLS.
"OPTIMUS" COMPOUND ROCK DRILL.
(P. J. OGLE'S PATENT.)
Consumes 40 per cent. less Compressed Air than any other Drill at the same time giving the most effectual results.
ESTIMATES AND FULL PARTICULARS ON APPLICATION.
RICHARD SCHRAM & CO., 17a, Great George Street, Westminster, S.W.
TELEGRAMS: "SCHRAM, LONDON," A1, A.B.C. and The Engineering Telegraph Codes Used.

GEORGE GREEN,
FOUNDRY, ABERYSTWYTH.
SILVER MEDALS AWARDED AT THE ROYAL CORNWALL POLYTECHNIC, 1872 & 1876; GOLD MEDAL AWARDED AT THE GREAT INTERNATIONAL MINING EXHIBITION, CRYSTAL PALACE, 1890
ONLY AWARDS GIVEN FOR CONCENTRATION PLANTS.
GREEN'S LATEST IMPROVED
Self-Acting or Automatic
Ore Dressing Machinery.
A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES up to Five Tons may be treated, and the commercial value determined. In this way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.
GOLD STAMP AND OTHER MILLS.
Estimates, Catalogues, and Full Particulars on Application.
Telegrams—Green, Foundry, Aberystwyth.

For PURE ALUMINIUM
98 to 99½ per cent. (98 per cent. minimum guaranteed) in
INGOTS, STICKS, & ROLLING SLABS;
ALSO FOR
SHEETS, &c., AND
FERRO-ALUMINIUM.
ALUMINIUM.
APPLY TO
HENRY R. MERTON & CO.,
2, Metal Exchange Buildings, Leadenhall Avenue,
LONDON, E.C.
AGENTS FOR THE BRITISH ALUMINIUM COMPANY, LIMITED.

A. & J. STEWART and CLYDESDALE, Limited.
Glasgow, Coatbridge, and Mossend.
WROUGHT IRON WELDED TUBES and FITTINGS for GAS, WATER, and STEAM.
Light Lap-welded Wrought-iron and Steel Tubes
(SPECIALLY ADAPTED FOR MINES).
With Patent Flanged Joints (as illustrated) for the Conveyance of Water, Steam, and Air, at High and Low Pressures.
LAP-WELDED IRON AND STEEL BOILER TUBES
FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.
STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.

SECTION OF PATENT FLANGED JOINT

PLAN OF PATENT FLANGED JOINT.

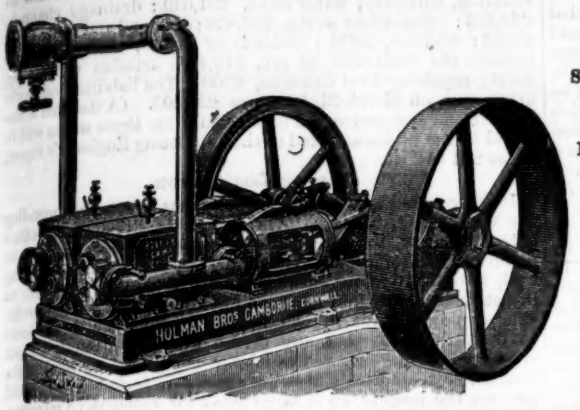
Head Offices: 41, OSWALD STREET, GLASGOW.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839.

Patentees and Sole Makers of

"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.



FIRST SILVER MEDAL, Highest Award, Mining Institute Contest, 1881.

Three Makers represented.

FIRST SILVER MEDAL Highest Award, Royal Cornwall Polytechnic Jubilee Exhibition Contest, 1882.

Five Makers represented.

AWARDED SILVER MEDAL INTERNATIONAL INVENTIONS EXHIBITION, 1885.

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **6 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

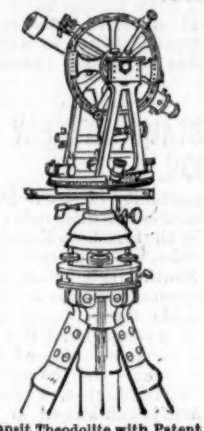
Estimates for ROCK BORING PLANT and GENERAL MINING MACHINERY on Application.

London Offices: 7 and 9, LEADENHALL BUILDINGS, E.C.

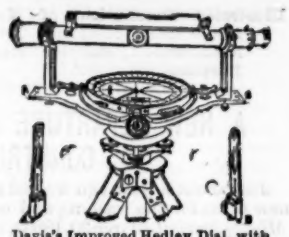
JOHN DAVIS AND SON,

ALL SAINTS WORKS, DERBY;

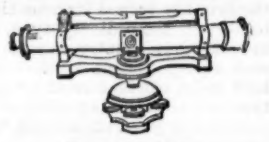
118, NEWGATE STREET, LONDON.



Transit Theodolite with Patent Hoffman Tripod Head, and Trough Compass.



Davis's Improved Hedley Dial, with Telescope and Sights Interchangeable, and Patent Hoffman Tripod Head



Dumpy Level wi Hoffman Patent Tripod Head.

MINING, SURVEYING, AND ENGINEERING INSTRUMENTS.

THEODOLITES. LEVELS. TACHEOMETERS.

Davis's Improved Hedley Miners' Dials, with HOFFMAN PATENT TRIPOD HEAD;

AND ALL DESCRIPTIONS OF MATHEMATICAL AND MINING SURVEYING INSTRUMENTS.

Revised Illustrated Catalogues Free to any Part the World.

SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS

SECTION (B) ELECTRICAL DEPARTMENT.

Gold Medal Awarded Mining Exhibition, 1890.

A. B. C. CABLE CODE, 4TH EDITION.

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Ore Reduction Co. (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT ½ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.

CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS,

6, COLONIAL AVENUE, MINORIES, LONDON, E.

The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

1733 John Wood, 5, John Dariton Street, Manchester.—Improvements in piston, gland, and other metallic packings.—April 13.

7738 William Donald, 62, St. Vincent Street, Glasgow.—Improvements in steam traps.—April 13.

7770 Alphonse Tauxe, 8, Quality Court, Chancery Lane, London.—A new or improved process for hardening iron, steel, and other hard metals.—April 13.

7791 Louis St. Peter, 48, Southampton Buildings, Chancery Lane, London.—Improvements in electric stop-motion for engines.—April 13.

7795 Franz Burger, 11, Southampton Buildings, Chancery Lane, London.—Improvements in shaft and blast furnaces.

7803 William Clarke, 23, Southampton Buildings, Chancery Lane, London.—Improvements in or relating to steam and other motive power engines or their equivalents, and the control and stoppage of the same in cases of accident.

7813 George Sinclair, 37, St. Vincent Street, Glasgow.—Improvements in apparatus for superheating steam.

7868 James Murray, 96, Buchanan Street, Glasgow.—Improvements in and relating to steam boiler and other furnaces.

7894 George Lloyd Berry, 28, Southampton Buildings, Chancery Lane, London.—Improved hot water or steam heating apparatus or radiators.—April 15.

8013 Thomas Mudd, Central Engine Works, West Hartlepool.—Improvements in apparatus connected with steam boilers.—April 16.

8046 Carl Wilhelm Stauss, 97, Newgate Street, London.—Smoke consuming apparatus for steam boiler and other furnaces.—April 16.

SPECIFICATIONS PUBLISHED.

7939, Meldrum and others, steam generator, &c., furnace, April 18; 10,232, Bey and others, steam boilers, April 18; 10,317, McPhail, furnaces, April 18; 3620, Isarmuth and Howarth, rich drilling machines, April 18.

The above specifications published may be had of Messrs. Rayner and Co., 37, Chancery Lane, London, at 10d. each, including postage.

LEAD COATING FOR IRON AND STEEL.—An American firm, the Ajax Lead Coating Company, of 46 to 52, Richmond-street, Philadelphia, calls attention, in a recent issue of the *Railroad Gazette*, to its process for coating metal with lead instead of with zinc, tin, and other compositions. This coating is done by immersing the metallic surfaces in a bath of molten lead. The manufacturers claim that such a coating is superior to a galvanising of zinc, and has a wider field of application. A particular application of this coating is for sheet iron roofs, particularly for rolling mills, chemical works, and all places where the roofing is exposed to gases or sea air. Another application of the lead coating is for gas and water pipes, as well as those used for alkalies, weak solutions of acids, &c. This, it is claimed, makes them as durable as lead pipe at a much less cost. The process is also applicable to smoke stacks, smoke pipes for heaters, screws, nuts, spikes, nails, chains, iron shutters, and, in fact, all purposes for which tinned or galvanised iron and steel are now used.—*Engineer and Iron Trades' Advertiser.*

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

Coolgardie Austral Gold Mining Proprietary (Limited).—Registered April 15 by Williams and Neville, Winchester House, E.C. Capital £90,000, divided into 90,000 shares of £1 each. Objects: To acquire, work, and turn to account three several gold mining properties, known respectively as blocks 371, 542, and 1909, the same being situate in the Coolgardie district of the colony of Western Australia, or any or either of them; to acquire any mines, mining, water or other rights, grants, concessions, options, metalliferous land, alluvial ground, &c., in West Australia and elsewhere; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting and metallurgical company in all or any of its branches; to develop the resources of such lands, estates, &c., as may from time to time be acquired by the company, by clearing, draining, irrigating, fencing, planting, building thereon, &c.; as farmers and graziers; to construct, maintain and work rail and tram roads, canals, wharves, electric, gas and waterworks, &c.

Liverpool Palace of Varieties (Limited).—Registered April 16 by W. O. Carter, with a capital of £70,000, divided into 14,000 shares of £5 each. Objects: To adopt and carry into effect an agreement made March 19, 1896, between James Wilson of the one part, and William Oliphant Carter, on behalf of this company, of the other part, for the acquisition by purchase of the premises known as the Star Theatre of Varieties, together with the restaurant and other buildings held therewith, situate at Williamson Square and Houghton Street, Liverpool, Lancashire, and the furniture, fittings, implements, scenery, scenic properties, wines, spirits, malt liquors, mineral waters, cigars, and other property and effects, in or upon the said premises or appertaining or belonging thereto, &c.; to purchase, take or lease, hire, or otherwise acquire any buildings, properties, easements, and effects which may seem directly or indirectly conducive to any of the objects of the company: and generally to carry on the business usually carried on by music hall proprietors and caterers for public entertainments and exhibitions; also as licensed victuallers, refreshment contractors, &c.

Blocks 35, 37, and 39, Hampton Plains (Limited). — Registered April 16 by Burn and Berridge, 11, Old Broad Street, E.C. Capital £ 20,000, divided into 120,000 shares of £1 each. Objects: To adopt and carry into effect an agreement expressed to be made between the directors of the first part, and the company of the other part, for the acquisition of certain mining property, particulars of which are given in the said agreement; and generally to acquire any freehold or other farms, properties, mines, mineral deposits, grants, concessions, leases, claims, licenses, water, and other rights in Western Australia or elsewhere; to prospect for metals and minerals; to develop and turn to account such land, &c., as may from time to time be acquired by the company; to construct, maintain, and work rail and tramroads, telegraph and telephone systems, canals, wharves, piers, gas, water, and electric works, &c.; as stock raisers, shipowners, &c.

Gold Fields of Venezuela (Limited).—Registered April 16 by Cheston and Sons, 1, Great Winchester Street, E.C. Capital £100,000, divided into 100,000 shares of £1 each. Objects: To adopt and carry into effect an agreement expressed to be made between Charles Harmon de Lemos, of the one part, and this company of the other part; and generally to acquire any freehold or other farms, properties, mines, mineral deposits, grants, concessions, leases, claims, licences, water and other rights in Venezuela; to prospect for metals and minerals, to develop and turn to account such land, &c., as may from time to time be acquired by the company; to construct, maintain, and work rail and tram roads, telegraph and telephone systems, canals, wharves, piers, gas, water, and electric works, &c.; as stock raisers, shipowners, &c.

Kamfirsdam Mines (Limited).—Registered April 16 by Slaughter and May, 18, Austinfriars, E.C. Capital £255,000, divided into 255,000 shares of £1 each. Objects: To adopt and carry into effect an agreement expressed to be made between Walter Somerville Lockhart of the first part, and this company of the other part; and generally to acquire any freehold or other farms, properties, mines, mineral deposits, grants, concessions, leases, claims, licenses, water and other rights in any part of the world; to prospect for metals and minerals; to develop and turn to account such land, &c., as may from time to time be acquired by the company; to construct, maintain, and work rail and tram roads, telegraph and telephone systems, canals, wharves, piers, gas, water and electric works, &c.; as stockraisers, shipowners, &c.

Dorothy Gold Mining Company (Limited).—Registered April 16 by W. C. Crosby Hill, 49-51, Moorgate Court, Moorgate Street, E.C. Capital £200,000, divided into 200,000 shares of £1 each. Objects. To adopt and carry into effect an agreement expressed to be made between the Western Australian Development Corporation (Limited) of the one part, and this company of the other part; to acquire any mines, mining, water and other rights, grants, leases, claims, concessions, buildings, easements, options, machinery, plant, stock-in-trade, utensils, and real and personal property of every description; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all or any of its branches; to develop the resources of such and as may be acquired by the company by clearing, planting, farming, and building thereon.

New Alburnia Gold Mining Company (Limited).—Registered April 16 by Ashurst, Morris, Crisp and Co., 17, Throgmorton Avenue, E.C. Capital £180,000, divided into 180,000 shares of £1 each. Objects: To adopt and carry into effect an agreement expressed to be made between Thomas Spencer Rea of the first part, and this company of the other part; and generally to acquire any freehold or other farms, properties, mines, mineral deposits, grants, concessions, leases, claims, licences, water and other rights, in New Zealand or elsewhere; to prospect for metals and minerals; to develop and turn to account such lands, &c., as may be acquired by the company; to construct, maintain, and work rail and tram roads, telegraph and telephone systems, canals, wharves, piers, gas, water and electric works, &c.; as stock raisers, shipowners, &c.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

**** We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.*

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Hydraulic Crane, May 9 (*Altona*).—For the re-erection of a hydraulic crane (2½ ton lift); also for a new crane (1 ton lift). Particulars from the Stadtbau-amt for 50 and 1·50 marks (5d. and 1s. 6d.).

Pipes, May 4 (*Dukinfield*).—For the supply and delivery at Dukinfield of about 800 tons of cast iron pipes, 3 feet in diameter, for the Stalybridge and Dukinfield Joint Sewerage Board. Specifications, forms of tender, and particulars may be obtained at the offices of the engineers, Messrs. John Newton and Son, 17, Cooper Street, Manchester, and sealed tenders, addressed to the Chairman of the Joint Board, to be sent to Mr. Wm. Smith, clerk, Council Offices, Dukinfield, by May 4.

Iron Bridge Work, May 6 (*Lisbon*).—For the supply of iron superstructure for several bridges on the Royal Portuguese Railway Company. Tenders to the Managing Director at the Company's Rocio Station, Lisbon. Particulars are also obtainable at the Paris office, rue de Chateaudun 28.

Coal, May 11 (*Guildford*).—For the supply of 16,000 to 20,000 tons of Durham gas coal, to be delivered free at Guildford Station during two years from July 1, 1896, to June 30, 1898, in such quantities and at such times as required, for the Guildford Gas Light and Coke Company.

Sinking Shafts (*Bishop Auckland*).—For the sinking of two shafts for the Etherley Grange and Woodhouse Colliery Company (Limited). Particulars may be had at the offices of the company, Station Town, Bishop Auckland.

Gas Coal, May 14 (*Gouda, Holland*).—For the supply of about 3000 tons of gas coal. Applications to the Direction of the Gouta Gasworks.

MECHANICAL ENGINEERING:

MACHINERY, MINING and RAILWAY PLANT, &c.

Illustrated Descriptions of New and Standard Mechanical Appliances, Accessories and Processes, adapted to Mining, Metallurgical, Railway, Engineering and other Industrial Purposes.

A NEW DEPARTURE IN STAMP BATTERY CONSTRUCTION.

Just about a year ago we had an opportunity of describing a new plant for the washing and concentration of diamonds (*The Mining Journal*, March 30, 1895), made by the Chatteris Engineering Company, of Chatteris, Cambridgeshire, which has since been erected and is doing excellent work in South Africa. Since then the firm has turned its attention to the construction of a stamp battery of the ordinary type, but suitable for transport over mountainous country on mule back. It is very evident that for such a purpose none of the component parts must exceed the load which can be carried by one or two mules, and the present type is due to the ingenuity of Mr. John Darlington, a mining engineer of great experience, whose name is well known in the mining world.

The mill in question, which has been examined by our representative, is a 20 head silver mill, constructed for the Bacis Gold and Silver Mines (Limited), Mexico, and has heads of a weight of 750 lbs., while the heaviest piece in the battery, whether of iron or woodwork, does not exceed 400 lbs. Sectional mills are in themselves no novelty, but they are usually associated with iron girder frames, and their accompanying inconveniences, or the timber for the framings, can be procured on the spot, and so does not enter into the question of transport. In this instance, however, the whole framing has to be carried over the hills, and so in order to reduce the sizes of the timber, the frames have been constructed of pitch pine planks varying in thickness from 3 inches to 4 inches, having thin mild steel plates sandwiched in between them, and with steel plates on the outside. The whole can be securely nailed and bolted together when permanently erected, and it is anticipated that the construction will be possessed of great strength and durability, and be superior and a great improvement to the use of a framing made solely of iron. The mortar blocks also are made up of square pieces of pitch pine all securely bolted together to form one solid mass, but in this case the plating is not used or desirable.

The metallic part of the mill, with the exception of the mortar box bottoms, is made entirely of steel. The cam shaft pullies are built up of wood 5 feet diameter, 10 inch face, and fitted with large flanged centres. The cam shafts are 4¼ inch diameter, of low carbon mild steel, and the stems are of 3¼ inch diameter of the same material. The mortar box bottoms are of cast-iron, made in sections carefully planed and dovetailed into each other, and keyed and bolted together to form one solid mass. The housings are of mild steel plate, fitted to the bottom, and secured with fitted bolts. The boxes are fitted with forged steel false bottoms 2½ inch thick and chromesteel shoes and dies. The feeding is effected by automatic feeders, and the whole mill, together with the amalgamating machinery, is constructed by the Chatteris Engineering Company in a style which is certainly a credit to them, and will be a source of great satisfaction to the purchasers. When erected at the mine it is to be driven by a turbine of 150 horse power, and as built up in the shops is as fine a piece of machinery for the purpose as one would wish to see. All its component parts are most carefully numbered, and as all the bolts are turned, the holes drilled, and the surfaces planed, there should be no difficulty in its final erection. We shall be glad to hear more of it after it has stood the test of a few months' run, which there is every reason to believe will be entirely successful, while we anticipate that the mill will in itself combine the portability of an iron-framed one, with the advantages of timber framing.

BRITISH GUIANA'S GOLD INDUSTRY.

The following is the amount of gold entered at the Custom House, for shipment by the R.M.S. *Eboe*, which left Georgetown on the 14th ult., and the names of the shippers:—

	Ozs.	dwts.	grs.	
British Guiana Bank	2899	17	19	
Colonial Bank ...	1307	2	10	
Total... ...	4207	0	5	Total Value ... $75,198·00

The following are the returns of gold entered at the office of the Department of Mines for the weeks ending:—

	March 28. Ozs.	dwts.	grs.		April 4. Ozs.	dwts.	grs.
Barama	43	0	10	...	70	15	5
Barima	221	0	0	...	596	0	1
Cuyuni	447	6	7	...	443	19	1
Essequebo ...	486	12	3	...	558	6	6
Groete Creek ...	15	1	9	...	44	0	22
Mazaruni ...				...	86	12	13
Potaro	568	4	1	...	413	13	1
Puruni	91	7	8	...	128	13	12
Total	1872	11	14	...	2349	0	13

Export of gold from January 1 to April 13:—

	Ozs.	dwts.	grs.	
1896	23,443	15	16	at $417,054·74
1895	25,058	9	10	at $443,877·04

CHARTERS TOWERS (QUEENSLAND) GOLD OUTPUT.

Year.	Quartz. Tons.	Gold. Ozs.
1886 ...	77,718 ...	133,027
1887 ...	82,853 ...	139,533
1888 ...	81,698 ...	177,432
1889 ...	108,828 ...	146,759
1890 ...	121,406 ...	155,236
1891 ...	174,390 ...	221,604
1892 ...	186,391 ...	259,268
1893 ...	203,944 ...	256,459
1894 ...	242,812 ...	263,874
1895 ...	249,319 ...	251,577

GERMAN MINING EXPERTS IN NEW ZEALAND.—The two German mining experts have visited quite a large number of mining properties in the Ohinemuri district, and have taken their departure to Te Aroha. Herr Schmeisser and Weihmann, the German experts, in company with Mr. Gordon, mining inspector, visited Waiorongomai. They also inspected the workings belonging to the English Syndicate, also the Loyalty Palace, and other properties in the district.

GOLDEN NEW ZEALAND.

HISTORY OF THE PAST YEAR.

Statement by the Minister of Mines.

(*Concluded from page* 520.)

Prospecting.

A CONSIDERABLE amount of prospecting has been carried on during the past year, and I am happy to state that good results have been obtained in some cases. But there are very large areas of ground, both in the North and Middle Islands, where prospecting operations, if carried on extensively, would be likely to open up much larger fields for mining. A remarkably rich lead of auriferous wash drift has been discovered at the Blue Spur, in the Westland district, which is likely to extend for a considerable distance. There is a good depth of wash drift, and some of it yields as much as 3 ounces of gold to the load. At Reefton, in the Keep-It-Dark Mine, and also in the Wealth of Nations Mine, new quartz lodes have been found at deeper levels than hitherto worked, containing good payable ore. In the North Island, an auriferous lode has been struck in a bore hole from the bottom of the Kapanga Company's shaft, at 1000 feet below the surface. At Waihi, richer stone is being got at the lowest level in the mine than was obtained near the surface; and also in the Crown Mine, at Karangahake, the richest ore is being obtained at the deepest level. All these discoveries have given more encouragement to continue prospecting operations. Large prospecting areas in the back country, where scarcely any prospecting has been done, have been applied for, and an offer has been made to deposit a considerable sum of money as an earnest that all conditions with regard to systematic prospecting operations on the areas applied for will be complied with.

Two parties were equipped last year to prospect the south-western portion of the Middle Island, between the Waiau River and Dusky Sound. One of the parties found gold in several of the beds of the creeks flowing into Chalky Inlet, but so far no ground payable for working has been discovered. This part of the country is very difficult of access, and being devoid of any tracks, prospecting is not carried on to any distance from the shore line. There is also a difficulty in obtaining regular supplies of provisions. I have deemed it desirable to have pigs, goats, and some deer turned out in the vicinity of the western sounds, so that in a few years men going into the interior can obtain food in the event of flooded streams preventing them getting back to their principal store depot on the coast line. Captain Fairchild has taken considerable interest in this matter, and has already turned out two lots of pigs.

The total amount expended in subsidies last year towards prospecting was £2379; and the amount of liabilities on authorities issued up to March 31 last was £3007.

Geological Exploration.

The geological explorations carried on last year by the Mining Geologist were confined to the West Coast, between the Buller and Teremakau Rivers. About two years ago a geological exploration was made between the Teremakau and the Mikonui Rivers. The great object to be attained is to systematically carry on these explorations so that a complete geological map of the whole colony can be prepared. Instead of making a hurried examination of isolated tracts of country, the explorations in future will be carried on so as to join on to what has already been done, and by this means the different formations can be shown on a map, which will give indications to the miner where to look for the different metals and minerals the colony contains.

A great deal of information was obtained last year in a part of the colony hitherto but little explored, between the Ocean Beach and the Inangahua River at Reefton; this includes a block of triangular form, the sides of which are about 50 miles in length. A geological map of this part of the colony, with the portion of Westland previously explored, and also showing the result of the explorations made in the upper Buller district, will be published with the departmental reports for this year.

Mining Machinery.

Information has been collected, as in former years, with regard to the improved appliances for carrying on mining operations, and especially in respect to the cyanide process for the treatment of ores containing gold and silver. Any improved method in the pulverisation of ores, gold saving appliances, hydraulic elevating, and dredging machinery, tends to admit of lower grade ores and gravels being operated on successfully, thereby extending the sphere of mining operations. No doubt each person who brings out a new improvement in mining machinery and appliances will naturally claim that his improvment is superior to all others. But by giving publicity to the different machines and appliances, as improved from time to time, we may induce further improvements to be made by other people, which will be of ultimate benefit to the colony generally.

Schools of Mines.

The Schools of Mines continue to do good work, and the students, when they finish their course of study, readily find employment in connection with mining. Some years ago the Cassel Company sent men out from Great Britain to take charge of the different cyanide plants that the company had erected, but latterly the students from the Thames School have been employed, and have given every satisfaction.

The situation of the Thames School, in the immediate heart of a large mining centre, affords opportunities to many students to attend night classes while they are earning their livelihood in the mines. This they could not do if the school was not where mining operations are carried on. The subjects taught at this school are:—General and mining geology, mineralogy, mathematics, land and mining surveying, mining, applied mechanics, hydraulics, assaying, theoretical and practical chemistry, metallurgy of gold and silver, physics, practical astronomy, and mechanical drawing. Several of these subjects are also taught at the Reefton School, but the attendance at that school has not warranted a continuous course of instruction. The instructor has been for a portion of the year engaged at the Denniston and Brunner Schools.

The course of instruction at the School of Mines in connection with the Otago University embraces not only the whole of the subjects taught at the Thames School, with the exception of practical astronomy, but it also includes subjects not taught at the Thames School—namely, biology, petrography, and palæontology. But as there are no crushing or cyanide plants attached to this school, as at the Thames, the students have not the same opportunity of acquiring a practical knowledge of the working of these plants. It is, however, gratifying to know that steps are now being taken to have crushing and cyanide plants erected at the Otago School of Mines, so that auriferous and argentiferous ores can be thoroughly tested there in order to ascertain their commercial value.

The expenditure on Schools of Mines last year was £1709, including £500 paid to the school attached to the Otago University. The total expenditure for the last 10 years, since the schools were established, has been £18,855.

Summary of Expenditure on Works.

The total expenditure on the construction of works authorised by the Department up to March 31 last has been £479,554. Of this amount £348,120 has been paid by Government, and £101,941 by local bodies, prospecting associations, and mining companies. These works consist of: Roads and tracks constructed from direct grants, £173,940; roads constructed on subsidies, £130,906; water races, £61,649; drainage channels, £22,923; prospecting works, £63,958; diamond and other drills, £4955; wharves, £436; Schools of Mines, assistance given towards the treatment of ore, £19,487; artesian well boring, £800; repairing flood damages, £500. The liabilities on works in progress on March 31 last were £29,493. (A detailed statement of the cost and of the expenditure on these works will be found in the tables annexed to the Inspecting Engineer's report, pages 274 to 284).

Mining Legislation.

It is proposed to ask the House to pass a measure amending the Mining Act, so as to give greater facilities, and to afford better security, for carrying on prospecting operations on an extensive scale for gold, silver, or other minerals, excepting coal, in order to afford encouragement to persons who wish to invest their money in mining, and at the same time find profitable employment for the working classes. It is also proposed to limit the time that any person can hold ground, without either complying with the labour conditions or having the ground, protected without being absolutely forfeited. This will prevent the locking up of large areas for speculative purposes. Provision is also to be made requiring foreign mining companies to have a Colonial Register, so that the stock can be dealt with in the colony. I also deemed it desirable to have a few amendments made in the Mining Companies Act. These amendments have been passed by the Legislature.

It is proposed to ask the House to renew the vote of last session, and thus give effect to the legislation passed last year in regard to prospecting deep levels, construction of water races and storage reservoirs, and prospecting, as well as for compensation arising from the proclamation of streams as water courses into which tailings from mining claims may be discharged. A considerable amount will be required this year to meet engagements already entered into.

Conclusion.

In concluding my remarks on the mining industry, I would state that the more I see of New Zealand, and the more conversant I become with the extensive mining operations carried on in different parts of the colony, the more I am impressed with the large asset the colony has in its mineral wealth, and the necessity of granting some assistance towards its development. The construction of roads and tracks will have to be proceeded with for many years to come, in order that the back country may be properly opened up. Encouragement will have to be given to capitalists to unite with the individual miner, so that both may combine in developing the mineral resources of the country, each receiving a fair share of the profits. Prospecting will have to be carried on more extensively in the future, and funds must be provided for granting assistance towards this object. Much of the land where mining is carried on is unsuitable for agriculture; but, nevertheless, the land is none the less valuable, as it is capable of supporting a large population, and of finding an outlet for surplus labour.

COPPER ORES.

Sampled April 8, and sold at Tabb's Hotel, Redruth, April 23.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Levant ...	114 ...	£4 9 0	Devon Great Consols	95 ...	£1 18 6
ditto ...	113 ...	4 9 0	ditto ...	91 ...	3 1 6
ditto ...	112 ...	3 18 6	ditto ...	95 ...	1 16 6
ditto ...	111 ...	3 18 6	Bawden's Ore ...	93 ...	2 9 6
ditto ...	107 ...	4 1 6	ditto ...	63 ...	4 13 6
ditto ...	108 ...	3 18 6	Tincroft ...	63 ...	2 6 6
ditto ...	80 ...	4 10 0	ditto ...	48 ...	2 6 6
ditto ...	8 ...	26 14 0	ditto ...	17 ...	6 5 6
Devon Great Consols	97 ...	1 19 8			

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
Levant ...	750 ...	£113 12 0	Bawden's Ore ...	150 ...	£280 18 0
Devon Great Con.	368 ...	163 12 6	Tincroft ...	128 ...	106 13 0

Average standard ...	£59 2 0	Average produce ...	10⅛
Average price per ton ...		£3 13 0	
Quantity of ore ...	1396	Quantity of fine copper,	147 tons 13 cwts.
Amount of money ...		£4903 7 6	

LAST SALE.

Average standard ...	£59 15 0	Average produce ...	10⅛

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	259¼ ...	£ 726 16 0
P. Grenfell and Sons	135 ...	381 17 6
Nevill, Druce, and Co. ...	191 ...	537 14 0
Williams, Foster, and Co. ...	310 ...	1161 5 3
Elliott's Metal Co. ...	146 ...	404 1 6
Charles Lambert and Co. ...	313 ...	953 7 6
Liverpool Silver and Copper Co.	140¾ ...	377 5 9
Total	1396	£4903 7 6

The next sale will be held at Redruth on June 18.

RÖNTGEN RAYS.—The experiments made by Edison at his laboratory, Orange, New Jersey, U.S., on the Röntgen rays have been in the direction of improving the Crookes vacuum tube which emits them and devising a good cryptoscope, or "fluoroscope," as he calls it, by which the rays can be observed without resorting to photography. The tube he has adopted is of an ellipsoidal shape, with disc electrodes at each end, slightly inclined to one another. The ends of the tube outside are coated with tinfoil as external electrodes. The best degree of exhaustion for the purpose is when the band spectrum runs into a continuous spectrum, and this is attained by him after half an-hour's working of the Sprengel air-pump. The glass used is "combustion tube glass," and is blown as thin as possible. After trying all the chemicals in his laboratory (some 1,800 in number) during four days and nights, he found that tungstate of calcium gave the best fluorescence or phosphorescence in the rays. He regards it as about eight times more effective than barium platino-cyanide. The salt is made by fusing together sodium tangstate and calcium chloride. The product is washed to remove the sodium chloride formed, and leave thein soluble crystals of tungstate of calcium, which are dried and sifted. Those which pass through a No. 30 mesh are preferred. The largest are strewn over a pasteboard screen coated with wet celluloid varnish, and finer ones are added until a smooth surface is obtained. A sighting box of pasteboard, not unlike an ordinary stereoscope, but without lenses, and having the coated screen in place of the photographic plates, forms the cryptoscope. The Röntgen rays, after passing through the hand or other opaque body, are allowed to fall on the coated surface of the screen, where they reveal themselves by phosphorescence excited in the crystals. An induction coil with a rotary circuit breaker supplies the electricity to excite the rays in the vacuum tube. The Edison apparatus has been specially designed for the use of surgeons in diagnosis, and it is very compact. MM. Bugnet and Gascard have found that crystallised alumina, such as ruby, sapphire, emerald, topaz, and cat's eye, the most precious stones after the diamond, can, like the latter, be readily told from their imitations by the Röntgen rays. The same may be said for turquoise. Mellite (mellate of aluminium) is almost as transparent to the rays as diamond. Fine, small pearls are more transparent than false ones of the same size, but the test is not so sure in the case of large pearls.—*Globe*.

THE GLENROCK CONSOLIDATED, LIMITED,

AN ENCOURAGING STATEMENT.

THE following circular has been issued to the shareholders:—Five months have now elapsed since the directors met you in general meeting, and placed before you the position and prospects of the undertaking in its reconstructed form, and they now have pleasure in reporting on the work done in New Zealand and West Australia. The directors are glad to note the rapid increase in the output of gold, both from New Zealand and West Australia, and it would appear that a brilliant future lies before these colonies as gold-producing countries.

Premier Mine, New Zealand.

The property comprises the Premier, Orient, Amante, Queen Victoria, Gladstone, and Sunrise claims, over 100 acres in extent, together with 30 heads of stamps, tramway and cyanide plant, and up to the present time has produced about £35,000 worth of gold. It will be remembered that there are two main tunnels on this property. The high level adit has been driven a distance of some 1900 feet westward into the mountain, and is still being proceeded with. By extension of this level it is considered good ore bodies may be struck that should considerably augment profits. Concerning this work Mr. Hosking reported as follows:—

"The high level adit has been driven a distance of 1559 feet from its mouth. In this drive the possibilities are very great, as should another shoot of stone be found, it will be in virgin ground from where it is discovered to the surface. It can be operated on from the high level adit, low level adit, and from the bottom of the incline shaft simultaneously, thereby insuring a very large output of auriferous ore. Should a parallel shoot of auriferous ore be met of only equal value to No. 1, the property would be immensely increased in value, as all dead work in drives and shafts will have been already constructed to work the No. 1 shoot."

The low level adit has been driven some 2100 feet, and the main shoot of ore was struck at about 1600 feet. In accordance with the recommendation of the late Mr. G. F. Hosking, the present system of working the shoot by an incline, following the bottom of the shoot on its dip, was designed. The dip of the shoot taken from the surface to the present workings is found to average 2½ in every 10, and it is on this grade that the main drive of the new incline is being carried. This important work, it is hoped, will open up the mine so as to ensure a regular and continuous supply of quartz for the reduction works. Whilst pushing ahead with this work, it has been necessary to suspend milling operations, and this accounts for the fact that only £1900 worth of gold has been won since the incline was started, but by degrees, as the new shaft advances, more room will be available for stoping. The latest addition to this property is the electrical hauling plant, required for the efficient working of the mine. It has been designed and supplied by the New Zealand Electrical Engineering Company. It is to haul three trucks (3 tons) at a time, at the rate of 60 feet a minute, up a grade of 21°, and will haul six trucks if required. The dynamo of this plant is driven from the countershaft of the mill. The motor for driving the hauling gear is connected with the dynamo by two stout cables. The motor will stand two generators, and give 36 horse power if needed. The whole plant is contained in a chamber 50 feet by 12 feet, which allows ample room for landing and shunting, and the plant has been found to work most satisfactorily.

Sunrise Mine.

This property is higher up the mountain than the Premier, and comprises about 55 acres, and is being opened up, the old tunnel being repaired and extended, with a view to strike the gold-bearing ore, and so facilitate its flotation as a separate company when developments justify such a course. Mr. Stanford states:—"What is required here is an aerial tramway to bring down the quartz to the Premier mill and take up materials, &c." Should the mine prove a success, which our local advisers express themselves as being confident that it will, a small electrical plant similar to the one now in use at the Premier Mine will be required.

West Australia.

Mr. W. H. Tinney, M.E., M.I.M.M., was despatched to this district, and arrived at Coolgardie early in November, and since his arrival has been busily engaged in visiting the various gold fields and mining centres. The line of policy your directors endeavoured to instil into the mind of Mr. Tinney was to secure properties under option, or otherwise, at first hand, so as to avoid the intermediary loading, which we know is very heavy in many mining companies, and to obtain, where possible, properties direct from Government at the nominal cost of registration, and by fulfilling the necessary labour conditions.

Your directors are pleased to report that Mr. Tinney appears to thoroughly understand the policy which has been inaugurated, and is acting in a manner which appears most beneficial for our interests. Several offers of properties have been placed at the disposal of the board, each proposition being carefully examined on this side, and where it was considered that a good opportunity presented itself, Mr. Tinney has been cabled to for his report on the same, and the directors feel assured, from the nature of such reports, that Mr. Tinney may be thoroughly relied on respecting the true value of any mine which he personally inspects. Mr. Tinney reports having visited some of the principal districts, such as I. O. U., Siberia, Black Flag, Broad Arrow, White Feather, and Hannan's. He is at the present time in touch with several properties that this company, in conjunction with another London company, may be able to work on joint account. Many of the recently exploited mines should soon be showing results, and it is confidently expected that they will be of such a nature as to enhance the value of good mining properties generally, and so increase the favour of this class of investment by the public. Under the agreement this company has with the Hampton Plains Estates (Limited) for acquiring properties within their jurisdiction, a well-equipped prospecting party was started soon after Mr. Tinney's arrival, and a considerable amount of prospecting work has been done.

Acquisition of La Marguerita.

Whilst prospecting on Block 53 of the Hampton Plains Estates, Mr. Tinney reports that he discovered a strong lode of ironstone and quartz—2 miles to the north of the camp. The lode was 6 feet wide on surface, and traceable for ½ mile. A shaft was immediately put in hand, and such satisfactory results obtained, some of the ore having assayed as high as 2½ ounces to the ton, that the property has been pegged out and lease taken for this company; so that this company now possesses a 24 acre block, known as La Marguerita, situated in the Coolgardie gold field, upon which development work is now actively taking place. A solid reef of very promising quartz 5 feet wide has been proved to a depth of 40 feet. This shaft will be continued to a depth of 80 or 90 feet, to prove the value of the ore at greater depth. Judging from the promising surface indications, any day may bring cable advice that might materially enhance the value of this important acquisition. From the sketch plan sent by Mr. Tinney, which can be seen at the office by any shareholder, it would appear that the property is favourably situated as regards timber and water. Our last mail advice from Mr. Tinney states that this find is outside the Hampton Plains Estate, and, therefore, has cost us nothing beyond the expenses of pegging out.

A Kurnalpi Property.

Your directors are further pleased to report that they have recently authorised purchase by cable of a 12 acre block in the Kurnalpi district, strongly recommended by Mr. Tinney, and described in a cablegram as consisting of 12 acres, prospected by a shaft to a depth of 90 feet, the average thickness of the quartz being 8 feet, and the average value of samples from different parts of the mine giving an astonishingly rich assay value of 30 to 35 ounces gold to the ton. It is intended to form a company to take over and develop this block, which should give a handsome profit to this company, and shareholders will, as far as practicable, be given the first right of applying for shares. The enormous developments that are taking place in West Australia, combined with the information that reaches us, causes your directors to consider that a vast field for profitable business will be found in that colony, and the success that has been achieved by various companies in providing capital for carefully selected and proved mining properties warrants the directors in anticipating a fair share of success for this company in the future, as it is the intention of your directors to work on those lines.

MINING IN BRITISH COLUMBIA.

By W. PELLEW HARVEY, F.C.S.

Cinnabar.

THE discovery of cinnabar in British Columbia, and its successful mining, has a peculiar interest, in view of the fact that up to the present quicksilver has not been produced in any part of British North America—indeed, mines of this description are few in any portion of our Empire.

The deposit referred to is situate on Kamloops Lake, about 4 miles by water from Savona, a station on the main line of the Canadian Pacific Railway.

The first discovery claim was located by Oliver Redpath on June 14, 1892, and named the Rosebush. Immediately afterwards the Lake View and Yellow Jacket claims were located by F. G. Christie and F. Roesses respectively. These, with four other claims subsequently located, were purchased by a company incorporated as the Cinnabar Mining Company of British Columbia (Limited), on July 10, 1895, with a capital of $100,000. There was not much work done on the property in the years following the discovery. Samples of the ore sent to the World's Fair at Chicago attracted considerable attention.

The present company procured an option on the property in the early part of 1895, and employed Mr. H. L. Lightener, of San Francisco, a gentleman well and favourably known as an authority on cinnabar mining, to examine it and report, the result being that the company purchased the property, secured the services of Mr. Lightener as superintendant, erected retorts for the high grade ore already mined, and proceeded to develop their property. The following extract from the first annual report of Mr. Lightener, dated December 31, 1895, will convey all remaining information:—

"The property consists of nine claims, and about 20 acres on the Lake shore, also a very valuable water power from Copper Creek of 100 inches at lowest mark, with a head of 300 or more feet. This water being alkaline is peculiarly adapted for spray condensing—the alkali neutralising the acid formed in reducing quicksilver ore, saving a marked percentage over pure water. The unlimited forest surrounding the property furnishes wood cheap, and, in fact, the natural advantages of this location are unequalled.

"During the fall my work was confined to examining the surface outcrop to aid in determining the course and dimensions of the veins. On the Rosebush location nine outcrops showing ore of low or furnace grade (1 to 2 per cent.) were uncovered. The tunnel, then 60 feet long, has been advanced to 284 feet, by crosscut to north-east 280 feet, most of these veins will be tapped. From a broken or detached bunch of ore found near the tunnel 60 flasks of metal was extracted by the retorts now in place on the Lake shore. You may rely on valuable developments being made on this claim. Veins are traceable to the top of the hill, where I have sunk pits on rich streaks of ore. On the Yellow Jacket north line and Polaris south line a shaft 70 feet is down to water from near the bottom of this shaft; 8 tons of selected ores gave 11 flasks of quicksilver, a good result, as a quantity of low-grade ore was dumped in extracting it. A tunnel started to drain this shaft 120 feet from surface is now in 164 feet. Vein matter was cut on this tunnel 120 feet from mouth, with good serpentine wall. This matter holds some rich ore, with a large showing of furnace ore."

Since the above was penned the tunnel has been connected with the shaft referred to, and cross drifts have proved the existence of a large body of ore. The directors are now considering the erection of furnaces to treat the low grade ores, which, the superintendent estimates, will save over 2 per cent. The following extract from Dr. Dawson's report, Geological Survey Department for 1894, may be of interest:—

Dr. Dawson writes:—What may prove to be an important deposit of cinnabar has been found in the vicinity of Copper Creek, Kamloops Lake.

The cinnabar occurs in regular sparry veins consisting chiefly of calcite and quartz, with some dolomite traversing zones of a grey felspathic and dolomitic rock, which readily weathers to a yellowish colour.

Both these zones and the contained veins as a rule run nearly magnetic north and south through the main rock of the hills, which is a dark greenish black tertiary eruptive, containing pyroxene and olivine, possibly a melaphyke, but much decomposed.

A considerable quantity of rich ore has been taken from the wider portion of the main vein opened on the Rosebush.

Apart from the Savona Ferry Mines, as referred to in the foregoing, there are several points in British Columbia where good specimens of cinnabar have been found, and exploitation is now going on to ascertain whether the deposits can be mined at a profit.

COAL ON SCOTCH RAILWAYS.—In the six months ending January 31 this year the Glasgow and South-Western Railway Company used coal in its locomotive department to the value of £27,485. The corresponding expenditure in the locomotive department of the Caledonian in the same period was £65,971. The North British paid out £67,622. The corresponding charges in the corresponding period of 1894-5 were:—Glasgow and South Western, £43,353; Caledonian, £87,380; and North British, £88,635. The companies, it will be observed, realised important economies in 1895-6.

ALUM IN NATAL.—A discovery of alum has been made in the Lower Umzimkulu district of Natal, but whether the deposit is of an extensive nature has not yet been reported.

ENGLISH CAPITAL IN CRIPPLE CREEK.

(BY OUR OWN CORRESPONDENT.)

PURSUANT to editorial suggestion that the writer should occasionally pay special attention to Colorado mining properties in which English capital is invested, and having regard to the fact that several syndicates have been recently organised in London for the exploitation of Cripple Creek properties, the writer recently personally visited the various properties of the Anglo-Colorado Exploration Syndicate (Limited), in which the Earl of Essex is Chairman of the board of directors. The properties of this syndicate were selected for the first letter as lying well within the recognised gold-bearing belt, and, therefore, more readily accessible within the compass of one day's time. Later on, it is proposed to send similar letters as to the properties of other syndicates lying further a-field. The writer in his tour was accompanied by Mr. Charles J. Moore, M.E., the manager and consulting engineer of the syndicate, who readily afforded every facility for a thorough inspection of each property.

The first claims visited were the New Hope (patented) and Contention (surveyed for patent), adjoining each other, comprising about 15 acres, on the saddle between Mineral Hill and Carbonate Hill, 1 mile north of the town of Cripple Creek. These properties are right on the northerly line and trend of the known veins which are yielding so largely further south. Mineral Hill contains a large body of andesitic breccia and tuff, which formation chiefly carries the gold deposits of the district. Several mines on Carbonate Hill adjacent have yielded paying ore, though not in large quantities. The Lincoln, King of Diamonds, and several other mines 2 miles to the north-east are in pay ore, showing that the above-mentioned claims of the syndicate are well within the gold belt. Moreover, the placers at the southern foot of Mineral and Carbonate Hills are rich, containing coarse nuggets, which evidently were broken off from veins in the slopes above. The New Hope has four shafts, one of 80 feet deep. One drift at the bottom of the main shaft runs 60 feet north, and one at 43 feet runs 100 feet north-west, both on the vein, which is continuous throughout, varying in width from 6 inches to 5 feet. Assays have been obtained up to $85, and there are several tons of ore on the dump which will average $25 per ton. The shaft, 8 feet by 4 feet, has been thoroughly timbered, hoisting frame erected, an engine has been ordered and will be placed on the property within the next few days. The Contention has a shaft 85 feet deep, exposing vein from 1 foot to 3 feet wide, from which assays have run up to $23 per ton. Works and improvements will be pushed on both these claims, and the indications on both are very encouraging.

A long drive over Carbonate Hill, Tenderfoot Hill, and Ironclad Hill brought us to the Abe Lincoln and Chiquita claims, belonging to the syndicate, on the north slope of Raven Hill, right in the trend of several known veins yielding pay ore on adjoining properties; in fact, the geological map recently issued by the United States Government shows that these two claims are on the same formation of andesitic breccia and tuff as the great producing mines of Battle Mountain, Raven Hill, Gold Hill, &c. Both claims are patented—aggregate about 7½ acres, and on the two there are seven shafts, varying from 30 feet to 75 feet deep. No fewer than eight veins through the claims have been proved by these shafts and various surface openings, and also by openings in adjacent properties. At present only one shaft is being worked, which has been sunk by the syndicate from the surface to 60 feet deep, where it exposes a well defined vein 3 feet wide, from which at that depth assays of $10 per ton are obtained, as against $1·50 to $2 per ton nearer the surface. Without giving technical details, it may be stated that everything indicates the opening up of valuable ore bodies with further development. The syndicate is preparing bunk house on the property for the accommodation of employés, to save a long walk and steep climb from the nearest cluster of houses, and on the completion of such housing facilities a force of men will be set to work to push drifts from the shafts to the intersections of known veins where good values are invariably found, resulting in the transformation of this ground into a valuable shipping property. From the known veins which extend into and across these claims, ore is being shipped from the adjoining Jo Dandy, Eclipse No. 2, Rattler, Ida May, &c.

A drive through the depression between Bull Hill and Battle Mountain brought us to the syndicate's Rigi claim (patented) on the eastern slope of Battle Mountain, immediately adjoining the easterly boundary of the celebrated Portland group, and within 1500 feet of the shaft house of the rich Anna Lee of that group. About $5000 worth of ore was taken out of the Rigi claim by former owners. Where other claims overlap, the rights of the Rigi to follow its veins have been fully preserved by agreements. There are six shafts on the property, and, so far, four separate veins disclosed, including three running parallel for the full length of the claim. Space does not admit of the details of the various shafts and drifts and veins exposed. Assays taken at random from piles of ore last shipped by former owners ran $151, $37, $19, and $140 per ton, and one small sample, though showing no gold to the naked eye, assayed $5180 per ton. The Rigi is on one of the strongest and most continuous veins in the district, as it is being worked for over a mile in length in the Rigi, Ocean Wave, Last Dollar, Ruby, and several others.

On leaving the Rigi a short call was made at the adjoining property of the Portland Company, whose Anna Lee shaft is down 900 feet, the main Portland shaft 600 feet, beside several lesser shafts. The company owns 130 acres stretching from the western boundary of the Rigi; has spent in purchasing ground, litigation, and equipment, $1,500,000; and has already paid about $450,000 in dividends. The company is now putting up the largest plant of machinery in the district, including four 100 horse power boilers, a special engine costing $14,000, immense flat wire cables and hoisting facilities to sink into a depth of 4000 feet, if possible.

A drive through the town of Victor, around the south-west base of Squaw Mountain and up Arequa Gulch, brought us to the syndicate's Eclipse claim (patented) 7 and 9-10th acres in extent, on the northern slope of Battle Mountain, and also on the same gold-producing formation of andesitic breccia and tuff mentioned above. Former owners developed this property to the extent of a tunnel 200 feet long, with two crosscut tunnels, the first exploiting the vein for 190 feet, the second for over 90 feet, and there are two winzes on the vein 35 feet and 90 feet respectively. From such workings about $40,000 of gold was taken, including very rich specimens showing free gold. The syndicate is sinking a new working shaft to the westward of the vein, and when 150 feet deep will crosscut back into the vein. The engine and boiler are on the ground, connections made, and the arrival of water tank already ordered will be followed by increase of force and vigorous prosecution of work. Much technical and detailed information of a very encouraging character could be given as to this claim, but it would be out of place in a letter of this description. It may be said, however, that there is ore in sight along the top of the present main stope, such stope extending 150 feet in length and to a maximum

height of 26 feet above the roof of the drift. The ore assays from $40 to $360 per ton, and considerable stealing was done before the syndicate obtained possession. Four different veins are known on the property, and float has been found from a fifth. One of the four veins is apparently the southern extension of the celebrated Moose vein.

On the above described four different properties the syndicate will have a force of 60 men employed within the next two weeks, and expect to be shipping ore from the Rigi and the Eclipse within 30 days.

It will be seen by the foregoing that the properties of the syndicate have been most judiciously selected; that it has wisely preferred dealing with patented properties, instead of unpatented claims, and thereby avoided the great risk of litigation which often occurs if an unpatented claim shows value; that the development work already done has fully confirmed the surface, geographical, and other favourable indications; that the syndicate is going ahead with judicious development work; and that the probabilities are that by reason of such development work each of the above properties will in the early future be added to the list of regular ore-shipping and dividend-paying mines of the district.

THOMAS TONGE.

MEETINGS OF MINING COMPANIES.

THE NEW GUSTON COMPANY, LIMITED.

THE ninthordinary general meeting of the shareholders in the New Guston Company (Limited) was held at Winchester House, EC., on Tuesday, Mr. THOMAS PHILLPOTTS presiding.

The SECRETARY (Mr. Bedford M'Neill) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—Assuming it to be your pleasure that the directors' report be taken as read, I will at once proceed to deal with the various matters in the accounts. The whole of the expenditure during the past year has been charged to revenue account; nothing whatever has been debited to capital account. The amount standing to the credit of the latter account is £9308 12s. 3d. The amount to the credit of the reserve account is £14,934 7s. 4d. The amount of revenue carried to the balance-sheet was £231 14s. 7d., which, together with the balance of revenue brought forward from the year 1894—viz., £589 2s.—gives a total revenue balance of £820 16s. 7d. If we add the three credit balances together, we have, viz.:—Capital account, £9308 12s. 3d.; reserve account, £14,934 7s. 4d.; revenue account, £820 16s. 7d.; making the total resources of the company on December 31 last, £25,063 16s. 2d. As to the distribution of this total sum of £25,063 16s. 2d.—we have invested in the Silverton Smelting and Mining Company, £10,206 13s. 11d. Ore in stock is valued at £760. Stores amount to £2293 7s. 9d. The cash assets exceed our liabilities by £6792 16s. 3d., and we have in cash at our London bank £5010 18s. 3d. We may regard the reserve account as consisting of £10,206 worth of stock in the Silverton Smelting and Mining Company, and £5000 in cash at the bank. The revenue and capital accounts are represented by £3000 worth of stores, &c., and £6700 the balance of our cash assets. The new or reconstructed company has been in existence since September 15, 1887, and last year, although we exceeded the output of the ore made in 1894 by 1499 tons, the total output being 14,833 tons, yet I regret to say that the average sale value, only £2 4s. 1d. per ton, left us practically no profit. It is with much regret that we are obliged to call attention to the large tonnage of ore mined, and to the very poor return of money which it gave, but it must be admitted that no foresight or skill on the part of anyone could have improved the natural grade of the ore, or have increased the prices which prevailed for silver and copper which it contained. Even if the conditions had only equalled those which prevailed during the year 1894 the revenue account would have been more than £8000 to the good. Our ores during the year were sold to the Silverton Smelting Company, and to the smelters at Pueblo and Durango. In making the sales the greatest care was taken to obtain the highest price for each distinct grade of ore. Although the smelter appears to have made a satisfactory rate of profit, yet the directors of the Smelter Company deemed it inadvisable to declare a dividend, hence there is no item to this effect in the accounts. I will now endeavour to forecast the probabilities that may be experienced during the present year. Hitherto the practice has been during the shipping season to work the mine mainly for the purpose of supplying ore. In the winter, or frost-bound season, shipping is entirely suspended, and during this period levels have been repaired and driven, the shaft sunk, stopes arranged and everything connected with the underground workings put into the utmost state of preparation ready for the next shipping season. This summer, however, it is intended to execute a considerable amount of development work, which will in its turn restrict the possible output of ore. On the other hand, with the low grade of ore in reserve, this may not have a serious effect upon the money returns, whilst it will enable the board to realise their object, which is to demonstrate, through exploration in deeper ground, the existence, or otherwise, of higher grade ore than has been worked during the last two or three years. As Mr. Harvey states in his report, there is no reason why high grade ore should not occur. The history of the mines in the district, and the peculiar character of the ore deposits, show that high grade may succeed low grade ore within a few feet, and that a mine, after a long period of poverty, may be quickly succeeded by one of great prosperity. When we took over the mine, no high grade ore was in reserve, yet in the first year—viz., 1888—315 tons were sold at £75 1s. 10d. per ton, and in this and the following four years the profits divided among the shareholders amounted to £239,624 12s., more than double the capital of the company. The main shaft is down to a 14th level, and after a crosscut has been driven to the ore break, the shaft will, probably, be sunk to a 15th level. In addition the southern ground in the upper levels will be developed. I must now mention that our excellent superintendent, Mr. Harvey, has sent in his resignation. He has resided continuously at the mines for a period of six years. His health has suffered not only from the extreme severity of the long winter weather, but from the strain of living at the great altitude of over 10,000 feet. He now requires a change to sea level and a long rest. Mr. Harvey will be succeeded by Mr. Harold Wilson, who is thoroughly acquainted with the mines and the peculiar character of the deposits. Mr. Wilson, who has just been in London, has strong hopes and expectations of making important discoveries of high grade ore. Various economies have been effected at the mine; while in London the expenses of the office have been reduced. The directors have determined to relinquish one-half of their fees until such time as prosperity may be assured for the shareholders. Our colleague, Mr. F. P. Crowther, President of the Silverton Smelting Company, is ready to afford any further information within his knowledge relative to the Silverton Smelter or the mines. I now formally move: "That the directors' report and balance-sheet for the year ending December 31, 1895, as presented, be received and adopted."

Mr. FRED. P. CROWTHER, in seconding the resolution, said the annual meeting of the Silverton Smelter Company would not be held till next month, and, therefore, he was not in possession of the final accounts to be then submitted, but he would say as President of the Smelter Company that no dividends could be declared without his sanction. Of course, working as he did in harmony with the New Guston board, of which he was a member, the policy of the directors of the Smelter Company had largely emanated from that company, and it was their intention not to pay any dividend this year, but to carry forward the profits they had made, and write them off the capital account so that they might have in hand all they spent on the Smelter before any dividends were declared. This, he thought, was a wise and conservative policy, and one with which they would all agree. The work of the Smelter during the past year had been very successful; they had treated some 23,700 tons of ore, and the results had been as stated in the directors' report. He might tell them that they treated 12,914 tons of the Guston Company's ore. It was of low grade, and returned, after deducting the cost of freight and treatment, $90,117 or £18,619. He would again point out that had it not been for the Smelter the Guston Mine would have been shut down. In fact, during the last two years it had kept the mine open by treating the low grade ore. Referring to the development of the mine Mr. Crowther said at the No. 7 level a disturbance took place and the ore body thrown bodily westwards for 50 feet. Between the 6 and 7 levels they found the more rich body of ore—it carried grey copper ore combined with silver and gold. Afterwards the character of the ore changed and became yellow and peacock copper, largely interspersed with iron pyrites. The peacock copper was perfectly distinct at the No. 12 level; the ore body was large but of low grade. The lode had not been discovered in the No. 13 level. It looked very much as if between the 12 and 13 levels, judging by the appearances, they would come to the end of the throw, and they hoped to find the ore again in the No. 14 level. The dip, however, went towards to the east, where they would have to go to find it again. Of course, the prosperity of the mine depended largely on the discoveries that were made in the next three months. There was, he thought, an excellent chance of finding other ore bodies to the south, and the levels were now being pushed forward in that direction. If this was the case, so much the better for the shareholders. In regard to the change of management, Mr. Harold Wilson was thoroughly capable of taking charge of the property, in addition to superintending the Smelter—in fact, he thought it would be an advantage to have the two under one management. Mr. Wilson had been on the property several years as Captain Harvey's assistant, and if the mine could be brought back to a state of healthy production, he was quite capable of doing it. (Applause.)

The resolution was carried unanimously.

The CHAIRMAN proposed the re-election of the retiring directors, Mr. John Darlington and Mr. Stewart Pixley.

Mr. CROWTHER seconded the motion, and it was agreed to.

Mr. REID moved the reappointment of the auditors—Messrs. Monkhouse, Goddard, Stoneham, and Co.

Mr. J. BECK seconded the resolution, and it was carried.

The meeting then concluded.

OCEANA DEVELOPMENT COMPANY, LIMITED.

The fourth ordinary general meeting of the Oceana Development Company (Limited) was held on Tuesday, at the Cannon-street Hotel, Mr. H. PASTEUR presiding.

The SECRETARY (Mr. H. Pincott Hill) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I must, in the first instance, express to you the regret of your directors in having had to postpone the date on which the annual meeting should have been held. It had been hoped that our Chairman, Mr. Conybeare, would have been sufficiently restored to health to have enabled him to take the chair at this meeting. Although he has returned to this country in greatly improved health, I regret to say that he has not felt strong enough to preside to-day, and I have to do my best in endeavouring to replace him. I propose, in the first instance, to draw attention to the accounts. You will notice in the balance-sheet, on the debit side, that the Oceana Company has exercised the option it had of taking the balance of capital, 50,000 shares at par, on which 10s. has been paid. This, whilst showing the confidence of the parent company in the prospects of the Development Company, has given us £25,000 in cash, which has been invested in dividend-paying securities until such time as the money may be required for the purposes of the company. Creditors, £1936, have all been paid off. On the credit side the lands purchased remain as before at £60,153, with a trifling addition of £141 for extinction of a servitude on one farm, and division and survey of two other undivided halves of two farms. 13,760 shares in the Oceana Transvaal Coal Company stand at 5s. per share, or £3440, as last year. With regard to the investments, standing at £21,344, these have been made in 12 different concerns and companies. You will bear in mind that it was not until the latter months of 1895 that the money was received on the 50,000 shares taken by the Oceana Company, which will explain why not more than £300 appears as received in dividends, in these accounts. The liability of £6075 for calls arises from shares in the North Charterland Exploration Company, on which 10s. is paid, and in the Oceana Minerals Company, on which 5s. is paid. It is unlikely that any calls will be made by either company this year. Turning to the profit and loss account, I would remind you that these accounts cover a period of 15 months, so that the £3100 expenditure in London and in the Transvaal would not be more than £2480 for one year. During the previous year these expenses amounted to £2750. You will notice that the prospecting, which in 1894 amounted to £3116, does not exceed £803 in the last 15 months. £423 of it was spent on work in the Zevenfontein Saltpan, and £380 on the tree plantation and farming on Graspan. I may state that upwards of £8000 was expended by the two prospecting syndicates on the Bloemhof and Klein Letaba blocks. Rents received and dividends amount to £707, against £343 in the previous year. The balance of £3229, being excess of expenditure over receipts for the 15 months to December 31 last, is less by £2600 than it was for the year ending September 30, 1894. You will have seen by the report that the work of development is proceeding, although not as quickly or successfully as we could have wished. In the early part of the year under review we were approached by a group of friends connected with our company, with an offer to undertake the prospecting of some of our properties by means of independent syndicates; they were prepared to employ their own capital and their staff of engineers and prospectors, on the condition that, in case of success—which would have enabled them to form companies for the purchase of some of the farms—and the working of the minerals discovered upon them, the Development Company should receive in fully-paid shares one-third of the nominal capital of the new company, they receiving one-third for their remuneration, and engaging to obtain subscribers to the last third, which was to form the working capital. Those terms appeared to your board sufficiently favourable, and they were accepted. A large amount of prospecting work has since been carried on by one of the syndicates in search of diamonds, on he group of farms in the Bloemhof district, but, I regret to say, so far without success. On the other hand, the other syndicate has been prospecting on the seven farms in the Klein Letaba district, where considerable outcrops and reefs exist. Gold has been found in several places, mainly near the T'Simquessi River on the farm Riversdale. The work had to be suspended during the hot season, but it is hoped that with the coming cool season further and satisfactory progress may be made on these farms, and that an opportunity may also arise to prospect Vygeboomsdrift, which, so far, has been closed against Europeans by the native hostile tribes in Magato's country. That farm, which had been visited some years ago, contains deposits of soapstone, found on assay to be gold-bearing. The time during which the two prospecting companies or syndicates are allowed to carry out their operations ends on March 1, 1897. We have retained all our rights on the two farms near Heidelberg, Eendragt, and Koppieskraal, but have not thought it advisable to carry on prospecting work there, as the whole district east, west, and south of them, is at present being prospected on all sides by numerous companies and syndicates, and any discoveries made in the neighbourhood of our farms will enable us, without expense to ourselves, to ascertain the direction in which gold-bearing reefs may be found to run into our land. Meanwhile, the two farms are let to responsible tenants, who pay rent and extend the tree cultivation on Eendragt. Tree cultivation is also carried on on a large scale on the farm Graspan, near Bloemhof, under the management of Mr. McEvoy, who has at present upwards of 13,000 gum trees growing, besides extensive nurseries. Mr. McEvoy is carrying on also experimental operations on a large salt pan on the farm Zevenfontein, of which the company has obtained the option, with a view of developing a salt trade which has been carried on for many years with success by Mr. Clarkson, the proprietor of the farm. The interest which this company possesses jointly with the Oceana Company and others in the options on the Ermelo coal fields is likely to attain considerable development shortly from the introduction of additional working capital by influential parties. It is hoped that the railway which is to connect Ermelo with the Netherlands line will shortly be sanctioned on terms which will ensure its immediate construction, and thus establish direct railway communication between Pretoria and Johannesburg on one hand, and Delagoa Bay on the other, with Ermelo, which is acknowledged as producing the best coal to be found in the Transvaal. Mr. T. Colquhoun, a well-known mining engineer and expert in coal, has recently examined the farms held on option by the syndicate. Of the farm Nooitgedacht, which adjoins the town of Ermelo, he writes:—"There appears to me to be an almost inexhaustible field of coal on this farm of most excellent quality for steam, house, and smithy purposes, cleaner and better coal than either in Brakpan, Springs, or Middleburg districts. The favourable position of the mines, situated as they are on the side of the hill, will enable you to dispense with the necessity of shaft sinking or erecting winding machinery. The coal seams on the north side of the stream have a gentle rise in the direction they are being worked, so the cost of haulage will be very light." Mr. Colquhoun also reports favourably on the farms Spitzkop, Tafelkop, and Vitgefallen. We have also an interest in the Northern Concessions Syndicate, through whose exertions during the last two or three years the concession for the Pretoria to Pietersburg Railway has been obtained. The construction of this line will begin almost immediately. It would ill become me to indulge in sanguine or too hopeful anticipations, in view of the state of uncertainty now prevailing in consequence of recent unfortunate events in South Africa, but, at the same time, I would point out to you that things change quickly, and that a period of activity may follow the present depression. Our expenditure has been lately, and is now, on a very reduced scale; we have ample funds at our disposal whenever they may be required, and several of our interests are likely to yield satisfactory results before long. And now it remains for me to move formally that the reports and accounts presented to you be and they are hereby received and approved. (Applause.)

Mr. JOSEPH G. SMITH seconded the motion, which was carried unanimously.

Mr. F. R. BULLOCK moved the re-election of the retiring directors, Mr. H. Pasteur and Mr. J. G. Smith, which was seconded by Mr. S. C. FOX, and carried. The appointment of Mr. Fox to a seat on the board, on his relinquishing the office of secretary, was unanimously confirmed.

Mr. H. G. M. CONYBEARE proposed the re-election of Mr. Welton, Jones, and Co., as auditors, and this, having been seconded by Mr. HOOD, was put and carried.

A vote of thanks to the Chairman and directors terminated the proceedings.

AMERICAN BELLE MINES, LIMITED.

The sixth ordinary general meeting of the shareholders in the American Belle Mines (Limited) took place on Tuesday, at Winchester House, E.C., under the presidency of Mr. THOMAS PHILLPOTTS.

The SECRETARY (Mr. Bedford McNeill) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I presume it is your pleasure that the directors' report and statement of accounts be taken as read. I will now proceed to deal with one or two matters in the balance-sheet. The programme enunciated at the last shareholders' meeting has been strictly adhered to, the output of ore for the year ending December 31 having almost met the total expenditure. From the balance-sheet you will notice that we have cash amounting to £2743 2s. 2d. In addition, there is an investment in the Silverton Smelting and Mining Company, of 19,500 shares, which is equivalent to £4018 8s. 7d. These two items practically constitute our resources. Mr. F. P. Crowther, who is present, and who is the President of the Silverton Smelting and Mining Company, will address himself more particularly to the business of that company a little later. I regret to say that our colleague, Mr. T. J. Bewick, has since the issue of the directors' report, resigned his seat at the board, and that Captain Harvey, who has been with us for some years past, finds himself compelled, owing to failing health, to resign his position as our mine superintendent. Mr. Harold Wilson has, as assistant mine superintendent, been associated with Captain Harvey for some years past, and will undertake the duties of mine superintendent from May 20. Mr. Wilson concurs in the recommendations contained in Captain Harvey's report, viz.:—To resume operations at the Hudson Mine, and to explore the ground in the National Belle Mine another 200 or 300 feet in depth. The Hudson Mine has been very little worked by this company, and Mr. Wilson has expressed himself very strongly as to the benefits that are likely to accrue from development in this part of our property. I do not know that I can well add anything more to what I have already stated. I may, however, remark that the directors are performing the duties of their office without any remuneration. The items of rents, salaries, and office expenses have also been materially reduced. I now formally move:—"That the directors' report and balance-sheet for the year ending December 31, 1895, as presented, be received and adopted."

Mr. FRED. P. CROWTHER seconded the proposition, and said he would like to draw their attention to the following paragraph in the directors' report:—"The directors propose to give effect to the recommendations made in Mr. Harvey's report—viz., to resume operations at the Hudson Mine, and to explore the ground in the National Belle Mine another two or three hundred feet in depth. The funds for executing the necessary work will be obtained (with the money in hand) from the realisation of the company's interest in the Silverton Smelter." The company's interest in the Silverton Smelter was $19,500, and negotiations, which they hoped shortly to conclude, were being carried on for the sale of these shares. The only thing that was holding them back for the moment was the presentation of the yearly report to the Silverton Smelter Company meeting to be held some time next month. In the meantime, they proposed to utilise the funds they had in hand, and proceed to re-open the Hudson Mine at the earlist possible date. The Hudson Mine had been closed down for several years, owing to the low price of copper, and there not being any market for that class of ore. But during the past year they had found out that they could treat their high grade ores at their own smelter. The shaft in the Hudson Mine had been sunk 200 feet. At 120 feet a level was driven, and an orebody discovered. It was of considerable size, being 14 feet in length, and the ore was all of average grade. In addition they intended to carry on the development of the National Belle Mine, and Captain Harvey in his report informed them of the work done in sinking the winze between the three and four levels. It was found that the orebody was slipping away to the south-west rapidly, and they proposed to go on with the winze until they got a connection. They also proposed to explore the ground in the mine another 200 feet or 300 feet in depth. The amount of money they would have in hand after selling the Silverton shares would be £6700, and Mr. Wilson, with whom he agreed, after having gone carefully into the figures with Captain Harvey, estimated that this sum would be amply sufficient to prove the existence of ore in this part of the mine as well as for the reopening of the Hudson Mine. With an increase in the quantity of their ore, which they had every chance of obtaining by the new work, he considered the company would be put in a very satisfactory position. (Applause.)

The motion was agreed to *nem con.*

The CHAIRMAN proposed the re-election of Mr. Dyson Weston as a director.

Mr. CROWTHER seconded the resolution, and it was carried.

The auditors, Messrs. Monkhouse, Goddard, Stoneham, and Co., were re-elected, and a vote of thanks to the Chairman and directors concluded the meeting.

LEADHILLS SILVER-LEAD MINING AND SMELTING COMPANY, LIMITED.

The 38th ordinary meeting of the members of the Leadhills Silver-Lead Mining and Smelting Company (Limited) was held at the office of the company, Finsbury House, Blomfield-street, on Wednesday last, the chair being occupied by Mr. PETER WATSON, J.P., C.C.

The SECRETARY (Mr. Felix F. Wilson) read the notice convening the meeting.

The half-yearly report of Mr. W. H. Paull, the resident manager, was submitted, as follows:—

GENTLEMEN,—I beg to submit the following as my half-yearly report on these mines, describing the principal operations carried out since September 30, 1895.—Brown's vein. The 160 fathom level has been extended 23 fathoms 1 foot 6 inches northwards from Jeffrey's shaft on a vein varying from 3 to 5 feet wide, composed of strong spar and stone. In the first 21 fathoms 2 feet 6 inches of this drivage the vein contained scarcely any lead ore; then for 8 fathoms 3 feet 6 inches in length it produced on an average 20 cwts. of ore per fathom, and from that point up to the present end (some 3 fathoms) it has only yielded occasional stones of ore; but an improvement may shortly be expected at this point, as a winze is being sunk below the 145 fathom level a short distance further north, where the vein is yielding 20 cwts. of ore per fathom, and said winze is down 4 fathoms 3 feet. The 160 fathom level south of Wilson's shaft has been driven 25 fathoms 5 feet 6 inches on a vein chiefly composed of stone and some spar at times, but has yielded no ore to value. This level should, however, be pushed on southwards, to prove the ground in that direction, where in the upper levels considerable quantities of lead ore were obtained. A drift, 4 fathoms above the 160 fathom level, has been extended 5 fathoms 5 feet 6 inches south of Wilson's shaft, on vein 6 to 7 feet wide, which yielded on an average 46 cwts. of lead ore per fathom. A stope is being worked over this drift by four men, which is producing 45 cwts. of ore per fathom. A drift, 6 fathoms above the 160, north of Wilson's shaft, has also been driven 28 fathoms 5 feet, on a vein varying from 3 to 4 feet wide, producing 35 cwts. of lead ore per fathom. A stope now being worked over this drift is worth 30 cwts. of ore per fathom. In a rise now being put up from stope above the 160 fathom level, south of Jeffrey's shaft, the vein is 4 feet wide, yielding 20 cwts. of ore per fathom. The rise is now within 8 feet of the 145 fathom level. A stope over the 160 fathom level north of Jeffrey's shaft will produce 35 cwts. of lead ore per fathom. A drift south of No. 1 stope 8 fathoms above the 115 fathom level north of Jeffrey's shaft has been driven 4 fathoms. Vein here 4 feet wide, well mixed with spar and spotted with lead ore, but not sufficient to value. In No. 2 stope above the 115 north of Jeffrey's shaft the vein is 4 feet wide, now worth 25 cwts. of lead ore per fathom. The 100 fathom level south of Wilson's shaft has been extended 19 fathoms 3 feet 6 inches on a vein showing spots of lead and blende ores only, making a total distance from the said shaft of 252 fathoms 2 feet. Suspended for the present. At a point 246 fathoms south of Wilson's shaft this level (the 100) intersected Brow vein, where it is 5 feet wide, composed of a kindly spar and stone with a little lead ore. The 100 fathom level is now extended 22¼ fathoms westward on this vein, which varied from 3 to 5 feet wide, and at several points it yielded 10, 15, and 20 cwts. of lead ore per fathom, but very irregular in produce. In the present forebreast the vein is 4 feet wide, showing a good mixture of spar containing strong spots of lead and blende ores, with water oozing freely therefrom, a very promising end, and may be fairly expected to become productive as extended upon towards the ore bearing ground worked on in the upper levels. A stope over the 100 fathom level south of Wilson's shaft on Brown's vein is worth 25 cwts. of lead ore. The 25 fathom level has been extended 19 fathoms 2 feet 9 inches southward on a vein 4 feet wide, showing occasional spots of lead ore. This level is now 196 fathoms 3 feet 3 inches south of Wilson's shaft; vein in forebreast composed of stone and spar, but unproductive. No. 2 winze below this level south of Wilson's shaft has been sunk 6 fathoms and communicated to the 100 fathom level, vein contained no ore to value. A stope over this level south of Wilson's shaft is producing 30 cwts. of ore per fathom. A stope above the 70 fathom level south of Wilson's shaft is yielding 75 cwts. of ore per fathom. The 50 fathom level north of main rise, south of Wilson's shaft, has been driven 13 fathoms 4 feet 4 inches, and the last 12 fathoms 4 feet 3 inches has been productive, worth on an average 33 cwts. of lead ore per fathom. The vein in forebreast is improved, and will yield 50 cwts. of ore per fathom.—Raik and Highwork veins. The crosscut east at the 100 fathom level, south of Wilson's shaft, has been lengthened 19 fathoms 2 feet, making a total distance of 95 fathoms 4 feet 9 inches from Brown's vein. Some 1 fathoms behind the forebreast, this crosscut passed through a vein 4½ feet wide, chiefly composed of quartz, spar, and stone, with strong spots of iron pyrites. This vein underlies west, contrary to Highwork, and I do not consider it of much value. We are meeting with small strings of a kindlier spar in driving the crosscut during the past few days, and also damp, and Highwork vein may still be ahead, but I should say that I am inclined to believe that it has fallen in with Raik vein further north-west. This crosscut should, however, be continued a short distance further to prove this. The 100 fathom level has been extended 19 fathoms 4 feet south of crosscut on footwall or western portion of Raik vein, which produced 15 cwts. of lead ore per fathom for the first 4½ fathoms of this drivage, but in the remainder the vein has been soft and unproductive. In the forebreast it is a little harder, but still too soft for the production of mineral. The 100 fathom level has also been driven north of crosscut, 2¼ fathoms on hanging wall or eastern portion of vein, which contained ore worth 40 cwts. per fathom for 7 feet in length; it then became poor, and the level was driven in a north-west direction 13 fathoms 4 feet 9 inches, the first 10 fathoms 4 feet 6 inches producing on an average 24 cwts. of lead ore per fathom. Here it reached the footwall portion, which is soft and poor, and we have resumed the driving on the eastern portion, which is becoming harder, and it looks likely to improve, but at present contains only occasional spots of lead ore. For the present I would recommend continuing the 100 south of crosscut on western part of vein, and the same level north of the eastern portion, and later on put out short crosscuts to prove the full width and value of the vein. Gripp's adit level, 100 fathoms above and to the north, has been cleared and repaired for 50 fathoms in length. We have still some fathoms to timber and secure at this level, and when completed it should be continued southwards, or probably a short crosscut driven westwards first, to prove the vein. Watson's shaft should also be put in order and continued deeper to develop this vein properly, it being in the right position for its development in depth.—Harrowvale vein. At Gripp's adit level, 50 fathoms south of junction with George's Roust vein, a rise has been put up 16 feet, on a vein 4 feet wide, composed of spar, pyrites, and spots of lead ore, but not improving in character the men were removed to drive Gripp's adit level, north-west of junction on George's Roust vein, which has been extended 9 fathoms 3 feet 6 inches. In this drivage the vein varied from 3 to 4½ feet wide, composed of spar, barytes, and at times produced some good stones of lead ore, but not enough to value. In the present end the vein shows spots of lead ore, and has a kindly appearance. The plant, machinery, &c., is being kept in fair working order, and every economy used at all points. At the smelting mills things are going on regularly, and in the coming week we shall commence cleaning the flues. The winter has been a favourable one, and all works kept going with but little hindrance. By pushing on the different points of exploration, we trust soon to make some good discoveries in the mines.—P.S. In new ground three quartz veins have been discovered on the Lowther Hills, one 30 feet wide, one 10 feet, and one 2½ feet wide. But very little was done on these veins after they were found, the winter having set in; but I would recommend their being further opened upon by costeaning, &c., now soon. Nothing of moment was found in opening up the old level below our reservoir. It was driven some 140 fathoms, partly on a vein 2 to 3 feet wide, containing spots of lead ore in a few places, and I could not recommend any expenditure there for the present.

Mr. POPE at the outset complained that the report was unaccompanied by plans, and, therefore, as he held, to a large extent incomprehensible to the shareholders.

The CHAIRMAN said: Gentlemen—The directors have to report that since the last meeting of shareholders they have continued the various operations which Mr. Pope says no one can understand. The statement proves to me that Mr. Pope can understand but very little with reference to metallic mining. The report is the same in form as all the reports which have emanated in connection with Leadhills and various other mines in its description of the sinking of shafts and the driving of levels, and I do not know what a manager can do otherwise than to report on such matters, and whether the ground is producing mineral or not. (Hear, hear.) We have carried on the operations in accordance with the agreement with Lord Hopetoun in sinking these various shafts and driving the levels. We have in some measure been successful in discovering ore, whilst other levels have been, comparatively speaking, barren. At the same time, we are not without hope that by extending these various explorations we shall meet with some discoveries. We have, I may say, fulfilled the terms of the agreement in the developments that were to take the best part of four or five years to accomplish, and I am happy to tell you that we have accomplished these works in the short time of something like three years. We have asked Lord Hopetoun for a continuance of the concession that is now subsisting between us, but he will not do anything for the present, or until the expiration of the period in question. I have had several interviews with his lordship's representatives at the mines, and at the expiration of two years he will consider whether we are to have a continuance of the present concession, or whether we are to come back to the terms of the lease. There is not a great deal of difference between his present concession and the old one, but at the same time it is a concession, and we want the lord and ourselves to work harmoniously together. I must call your attention to the fact—which I stated at the last meeting, and, indeed, on several previous occasions—that we have had a very low price for lead during the last two or three years. At one time I do not think we could have sold the whole of our stocks of lead for anything like £8 10s. per ton, and the directors, rather than sacrifice their produce at that figure, felt it would be the right thing to hold their stock, and they did so. Fortunately, we have always nursed our capital, and we were in a position to hold the lead to greater advantage than other home mines in the country. Well, the consequence of doing so has been that during the last few months we have sold what before we could not sell at £8 10s., at £10, £10 11s., £11, and over. (Applause.) The position of our financial affairs has so improved recently that we now hold a very large amount of cash, and we still hold a very considerable quantity of lead. Moreover, we are not without hope that the price of lead will improve, and, although during the past few weeks it has been very sluggish, and there has been a great deal of lead sent in from abroad, causing the market to fall away, during the last day or two the price has improved, and yesterday we sold 50 tons at a considerable advance upon what the quotation is at the present time. We are in hopes that we shall soon have even a better price than now. Under these circumstances, the directors have declared a dividend to-day of 1s. 6d. per share—(hear, hear)—and we see our way perfectly clear to do this. But I may tell the shareholders in reference to this — and my colleagues can bear me out in the matter—that when we got the new lease there was a very strong impression that we should be limited to having only a certain quantity of lead in stock. If that clause had been put in I do not hesitate to tell you that instead of being able to declare a dividend of 1s. 6d. per share to the shareholders to-day, there would have been considerably more than that amount as loss to the company. Therefore we, as directors, do take credit that we have shown some discretion in connection with this matter. Of course, had lead gone down much lower some of the shareholders would have turned round and said:—"You have no business to speculate in lead," but we must keep our eyes and ears open to know what is going on. A few years ago the Broken Hill Proprietary was producing an enormous quantity of lead. It is still producing largely, but nothing at all in proportion to what it has done in the past. I made it my business to enquire what is the probable continuance of this production, and since silver is going down, that in all probability will affect the Broken Hill Proprietary. Thus we have a considerable improvement in the price of lead, and we are now in a position to give you a dividend to-day of 1s. 6d. per share. No doubt Mr. West will remember the remarks I made at the last meeting with reference to the question of lead. With regard to the other matters which are now going on at the mines, we want to throw out certain crosscuts to get under some ore ground that we have the expectation of meeting with at the deeper levels. This, however, as is always the case with mining, will take a great deal of time, and I think in all probability we shall meet with some important ore ground there. It is a satisfaction to me to know that we have been able to nurse the capital in the way we have for so many years, because I think that 99 per cent. of the mines of this country have gone to the wall, while we have done everything we possibly could to bring the concern into its present state. We have a very excellent manager in Captain Paull, who is a very straightforward man in every way. There have been certain questions in regard to wages and holidays, but they have all been settled amicably, and we are going on harmoniously at the mines, with every prospect, I think, for the future. With these remarks I shall be very happy to answer any questions. At the next shareholders meeting we shall give you a statement of accounts, and we shall hope to be able to give you as good an account as we have given to-day. I have here details of our various workings; I do not know whether they would be of interest to you. (Applause.)

Mr. WEST enquired why it was, in view of the price of lead which had latterly ruled, that the interim dividend had not been paid sooner.

The CHAIRMAN explained that the company had only recently sold the greater portion of its lead, so that they had only recently been in a position to pay the dividend.

Mr. POPE complained of what he considered to be a lack of energy on the part of the management.

The CHAIRMAN replied that, according to the terms of the lease they had from Lord Hopetoun, they were bound to work the mine energetically; and as proof that the company observed this condition, Lord Hopetoun's representative, who had recently visited the mine, had expressed himself as perfectly satisfied with the operations that were being carried on. There was, indeed, no lead mine in the country where operations had been carried on with greater energy than at their own. They had kept going in the most difficult times, when other mines had had to suspend operations, and he thought the shareholders ought to feel grateful that the property was still working. (Hear, hear.)

Mr. POPE quoted some figures, complaining that the production of lead was not large enough, amounting to only 22 tons a week.

The SECRETARY explained that Mr. Pope was wrong in quoting figures of sales, and not of production.

Mr. TAYLOR asked whether better terms could not be arranged with Lord Hopetoun.

The CHAIRMAN said that the present concession would last for another two years. There was nothing at all to complain of in the treatment they received from Lord Hopetoun. But if he would kindly say he would allow them to go on on the same terms for another three or four years they would undertake to push out certain crosscuts. Lord Hopetoun's adviser believed that at the expiration of the two years a satisfactory arrangement would be arrived at. He (the Chairman) considered that they were in very good hands with Lord Hopetoun. The company's financial position was, he might repeat, a very satisfactory one. The reserve fund of £2500 was put into a very good stock, and they had recently put another £1000 into another good stock.

On the motion of the CHAIRMAN, seconded by Mr. T. GLEN, the retiring director (Mr. C. F. Southgate) was re-elected.

The CHAIRMAN moved the election of Mr. J. Coppen to the board, saying that he was a gentleman held in pre-eminently high esteem in the City of London, and with a very good knowledge of mining, both at home and abroad. Every day there was some business to be done in connection with the company, and occasionally the other two directors were not available.

Mr. ROGERS seconded the motion.

One or two SHAREHOLDERS expressed the opinion that there was no necessity for an additional director, but the motion was eventually put, and carried by a large majority.

Mr. SOUTHGATE and Mr. COPPEN returned thanks for their election, the latter gentleman explaining that he had consented to join the board because he felt confident that the company had an excellent future, and because he believed there was occasionally some difficulty in getting the requisite number of directors together.

Mr. ROGERS moved a cordial vote of thanks to the Chairman and directors, saying he was sure the vast bulk of the shareholders would be satisfied with what they had done for the company. He had attended many meetings of the company, and that was the first time there had been anything like a note of discord introduced. (Hear, hear.)

Mr. WEST cordially seconded the vote, saying that the directors had never attempted to stifle discussion at meetings, while the Chairman had been ever ready to answer questions. (Cheers).

A brief acknowledgment of the vote from the CHAIRMAN terminated the proceedings.

Letters of allotment have been posted in connection with the COOLGARDIE AUSTRAL GOLD MINING COMPANY (LIMITED).

LINARES LEAD MINING COMPANY, LIMITED.

The half-yearly general meeting of the shareholders in the Linares Lead Mining Company (Limited) was held on Thursday, at the office of the company, No. 6, Queen-street-place, Mr. RICHARD DONAGAN (Chairman of the board) presiding.

The SECRETARY (Mr. Henry Swaffield) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—It is again our pleasure to come before you with a favourable report, and that pleasure is enhanced by the fact that the report is even more favourable than that presented on the last occasion of our meeting the shareholders. We had then a profit of £6442 to deal with, which was as much as that because, owing to a rise in the price of lead, we were enabled to value our stocks in hand on June 30, 1895, at an increase of £1 a ton. We have now a profit of £8192 to deal with, although the stocks in hand on December 31 were valued at an increase of only about 5s. a ton over the valuation of June 30. You will, doubtless, have observed the very interesting table at page 6 of the report, by which it is shown that the mines belonging to this company have now been at work for 46 years, and that the profits during that long period have amounted altogether to £425,254, and a remarkable feature of that table, divided as it is into periods of 10 years, is that the profit gained during the last 10 years ending December, 1895, exceeded that for the 10 years ending December, 1875, and also to a larger extent than for the 10 years ending December, 1885. Now, seeing that the reserves in the mines have of late, for several consecutive occasions, been reported as estimated at 7000 tons, while in December, 1885, the reserves were only 5450 tons, it follows that an increase of 1550 tons in the reserves has been made during the last decade. This is a very satisfactory condition of matters, and there can be no doubt that the large amount of prosperity and the very long period over which it has extended are attributable to the very careful and judicious manner in which the mines have been handled. There has never been any forcing or grabbing at rich bits, with the inevitable result of a consequent reaction, and hence it is that after 46 years of work the mines are in the flourishing condition of to-day. The mine is getting very near to its jubilee year, and I, being very proud of my position of Chairman of the company, sincerely hope I may have continued good health so as to preside on that auspicious occasion. On the subject of the market for lead, there is nothing very particular to say. There was a rise in price during the currency of the half-year, but at the end of the half-year that highest price had not been maintained, and since the close of the half-year there has been a fall, but only a slight one, and at the present moment the price is recovering. Our latest sale was £11 3s. 9d., being 7s. 6d. lower than the latest sale that I was able to report at our last meeting. However, we have by this time got more or less accustomed to low prices, and having also become accustomed to conducting things upon an economical basis, we contrive to make a fair profit out of prices which in former years would not have met the cost of production. Every possible effort is made by Mr. Tonkin, and those associated with him, to keep down cost, and which efforts have been successful, added to which transport and fuel are considerably lower than they used to be when better prices were obtainable for our produce. An important event which has occurred during the half-year now under review is the change made in our financial arrangements, briefly alluded to in the directors' report. From a very early period in the history of the company the money required to defray the expenses appearing in the monthly cost sheets, has been provided in Spain by the drawing of bills on London, and such bills have been duly paid at the company's bankers three months after date. I recollect that the late Mr. Cox at one of the meetings of the company, in answer to an enquiry of a shareholder, explained the *modus operandi*, and stated that but for those arrangements the company would require considerably more capital in order to carry on its transactions—which was quite correct at that time. Lately circumstances occurred which rendered Spanish bills on London not so negotiable as they used to be, and some demur was made to the continuance of the system. We were fortunately in a position to meet this difficulty, and at once determined to remit cash instead. The effect, of course, was that for a time we had simultaneously to pay the current bills and make the cash remittances, which was effected by selling a little more lead than we might otherwise have done, and by temporarily making use of the accrued profits. You will see by the accounts to June 30, 1895, we had at that date £9200 of bills payable, while in the accounts to December 31, 1895, bills payable had become reduced to £4884. Since then all these bills have been taken up, and, at present, we have not a single bill current. This alteration is an advantage to us, inasmuch as we get a better exchange for a cash remittance than we used to do for a bill—in other words a cheque for £1000 puts more Spanish money into the hands of our superintendent than he used to get for a bill of that amount. This is some compensation for a step we are constrained to take, and that is for a limited time to devote a portion of the profits made to providing a little more working capital. You will see from the report that on the present occasion we recommend that £1000 should be taken from the profit of the half-year, and written off mines, buildings, and machinery account, and this operation may have to be from time to time repealed in order that the equilibrium may be again established. As the residue of the profit gives a dividend of 9s. for the half-year, against 7s. last half-year, when £750 was put to the reserve fund, there is no great hardship involved. As to the reserve fund, it may, perhaps, prove a pleasing piece of intelligence to announce that that addition of £750 last half-year brought the reserve fund up to the limit prescribed by the Articles of Association, and having thus built the fund up again, we hope that nothing may occur to diminish it. Mr. Taylor will, as usual, give us his views as to the mines, and I conclude by moving, "That the reports now taken as read, together with the accounts and balance-sheet, be received and adopted."

Mr. JOHN TAYLOR said: I beg to second the resolution with great pleasure. I ventured at the last general meeting, held six months ago, to say that I considered the outlook for the future was very favourable. The correctness of that anticipation you will all have realised has been fully borne out by the results so far obtained, and again I think I may say the prospects of a continuation of the good returns are at present most encouraging. In the old mine the unwatering of the levels from the bottom of the 270 winze, of which I spoke six months ago, was effected in December, and the 200 fathom level is now being driven east and west. So far no very valuable ground has been met with, but in the western end the lode produces some good stones of ore, and is described as promising. We have every reason to hope that in both these levels and also in the 200 fathom level west of Peill's engine shaft we shall open up good ground during the present half year, the reason being that in each case the levels above have been productive. In the 178 fathom level west of Warne's a considerable length of lode has been developed which we can take away at a good profit. In the Quinientos Mine, you will recollect that at the time of the last meeting the 165 fathom level east of Taylor's shaft had been in a rich lode for some months. The fine ore ground in this level was entered nearly a year ago, and for a considerable distance the value averaged 3 tons per fathom. At one time it was reported as high as 5 tons per fathom. The drivage of the 165 fathom level has been carried on uninterruptedly in a lode worth recently, on an average, 1 ton per fathom, but at times it yielded twice this amount. It still continues to open up ground of fair value. The level below the 185 fathom east of Taylor's engine shaft has been driven a great distance, and is being pushed on rapidly still, with a view of getting into good ore ground. Of this point favourable news came to us by the latest advices from the mines dated April 15 and April 22. On April 22, the last report we have received, we were informed that this level is entering productive ground, and is valued at ¾ of a ton per fathom, although the level is still 10 or 12 metres short of the forebreast, the point at which we expected to find the lode improve. Alto-

DEFECTIVE ORIGINAL

gether I think the story of the working of the mine is very satisfactory. The result of the last 6 months' work I certainly think is also satisfactory, and we must go back 5 years to find as good a half-year as that we have now under review. It is very interesting to refer to the report at that time—I mean the report for the six months ending December 31, 1890. During that period 2324 tons of lead were sold, while for the half-year just expired the amount was 2394 tons, which was 70 tons more. But for this we only received £26,087, against £31,737 in 1890, or £5650 less. This you will understand, is in consequence of the average price of lead being considerably lower. The capital profit made, notwithstanding this greatly reduced amount of money received for the lead, has been in a great measure due, if not entirely due, to the economical way in which the mines have been conducted. These economies have been effected by Mr. Tonkin and his assistants, who actually bring about this result, viz.:—that the cost per ton is 30s. less than what it was in the corresponding period five years ago. That shows a very large reduction, and it is undoubtedly to the constant watchfulness on the part of the agents of every item of our expenditure that the success of the company is mainly due. We shall again to-day, as we have done in the past, gladly accord them our very best thanks.

Replying to a SHAREHOLDER, the CHAIRMAN said the Spanish Government duty on silver-lead had been abolished.

The resolution was carried unanimously.

The CHAIRMAN then moved:—"That the sum of £1000 be written off the profit and loss account, and placed to the credit of the mines, buildings, and machinery account."

Mr. HENTY seconded the motion.

Mr. WHITE asked whether this was necessary, because of the wearing out of the machinery.

The CHAIRMAN replied in the negative. Previously they had carried on the business in Spain by means of bills, but they now proposed to remit cash monthly, and the board thought the most straightforward way to meet this was to write off the profit and loss account £1000. It was simply a question of finance.

The resolution was carried.

The CHAIRMAN proposed the re election of Mr. Edward St. John as a director.

Mr. AGAR seconded the motion, and it was agreed to.

The CHAIRMAN also moved the re-election of Mr. F. H. Simmonds as a director.

Mr. ST. JOHN seconded the resolution, which was carried.

Mr. WHITE proposed, and Mr. DOWSON seconded the re-election of Messrs. J. W. Jepps and S. J. Wilde as auditors.

The motion was carried.

Mr. JEPPS proposed a vote of thanks to the Chairman, directors, managers, and the staff in Spain.

Mr. WHITE seconded the vote, and it was heartily accorded.

The CHAIRMAN briefly cknowledged the compliment, and the meeting terminated.

THE FORTUNA COMPANY, LIMITED.

The half-yearly general meeting of the shareholders in the Fortuna Company (Limited) took place at the company's office, No. 6, Queen-street-place, on Thursday, the chair being occupied by Mr. ROBERT HENTY.

The SECRETARY (Mr. Henry Swaffield) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—We appear before you to-day with a better statement of accounts than we were able to submit to you six months ago. Circumstances, therefore, have favoured us to some extent, the principal being that the price of lead has shown an improvement, but the result of our mining operations on the whole has been disappointing, because during the half-year no new ore bodies were opened out. I am glad to tell you, however, that our prospects now look less gloomy than they did, because within the past fortnight the lode in our bottom level at Los Salidos has improved, and is now worth 2 tons of lead ore per fathom. If this level should maintain this yield it would be an encouragement for us to sink Taylor's shaft to a yet deeper level. We must expect ups and downs in mining, and, after all, we ought not to be discouraged simply because we are just now under a cloud. Our company has had a remarkably good history, and it has paid remarkably good dividends, so we must not be downhearted, but hope for better times. If our mines should fail us by-and-bye, why then we must consider the acquisition of a new mine—that is, if we could light upon one with really good prospects of success. Fortunately, we are well off financially, so I think we can look into the future without any serious misgivings. I now beg to move that the report and accounts be received and adopted.

Mr. DONAGAN seconded the resolution.

Mr. JOHN TAYLOR said: In the Canada Incosa Mine the driving of the 100 fathom level west of San Pedro's shaft has been continued in a lode worth ½ a ton per fathom. This is not a very bright story, but Mr. Tonkin now proposes to sink the shaft a further 15 fathoms. There is a distinct encouragement to do this, as the lode has been much richer below the 100 fathom than it was in the workings below the 90 fathom level. In the Los Salidos Mine the 212 fathom level driving east of Taylor's engine shaft, the lode was unproductive until the month of January, when it improved to ½ of a ton, an average which it maintained until quite recently. A good length has been added to the level. In his report Mr. Tonkin says:—"We are rapidly approaching the richest part of our bunch." Now, in recent advices, a decided improvement has been reported. The level is going into what Mr. Tonkin describes as a good solid lode of ore, worth 2 tons to 2½ tons per fathom, and it has, he adds, the appearance of continuing for some time to come. It is an extremely important point, and I hope that the anticipation will be realised. Then there is a winze sinking below the level some distance in advance, which is also going down in a good lode. This 212 fathom level has been undoubtedly disappointing to us, as it passed for some distance through ground which we expected would have been productive, as it was productive at the 200 fathom level. I trust that this discovery may be the commencement of a better state of things, and I think we may reasonably hope during the next few months to hear of these levels opening up a large extent of productive ground.

The resolution was carried unanimously.

The CHAIRMAN proposed "That the sum of £250 be written off the profit and loss account, and placed to the credit of the mines, buildings, and machinery account."

Mr. DONAGAN seconded the motion, and it was agreed to.

The CHAIRMAN next moved the re-election of Mr. Edward St. John as a director.

Mr. AGAR seconded the resolution, which was carried.

The CHAIRMAN also proposed the reappointment of Mr. F. H. Simmonds as a director.

Mr. ST. JOHN seconded the resolution, and it was adopted.

Mr. DOWSON proposed the re-election of the auditors, Messrs. S. J. Wilde and S. H. Judd.

Mr. WHITE seconded the resolution, and it was carried.

Mr. WHITE moved a vote of thanks to the Chairman, directors, managers, and staff.

Mr. DOWSON seconded the motion, and it was agreed to.

The CHAIRMAN suitably replied, and the proceedings concluded.

THE ALAMILLOS COMPANY, LIMITED.

The half-yearly general meeting of the shareholders in the Alamillos Company (Limited) was held at the office of the company, No. 6, Queen-street-place, on Thursday, under the presidency of Mr. ROBERT HENTY.

The SECRETARY (Mr. Henry Swaffield) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—We meet you under more favourable auspices to-day than we have done for some time past. Of late years it has been our misfortune to have to deplore the poverty of the mines, and this, I need hardly say, was a source of great discouragement to us, but latterly things have taken a turn for the better, for the mines have improved in one or two important points, and the lead market has also taken a turn for the better. Mining is proverbially uncertain, and this improved state of things at the mines may not continue, but whilst it lasts it is at all events a source of great gratification to us. The profit made during the half-year under review was £3480 14s., and this has enabled us to pay you a better dividend than we did six months ago. Whilst making this profit, we vigorously kept up the exploratory works, and it is fortunate that we did so, as it is by this means that we have developed the ore bodies, which are announced to you to-day in the reports which are placed in your hands. We shall continue in the future the miner-like and prudent course which we have hitherto adopted in working the mines, and hope it will be attended with success. Considering we have been working the mines for 33 years, and have returned to our shareholders in dividends £152,541 on its capital of £70,000, we have done fairly well; and more than this—our reserves of discovered ore (3200 tons) forms an excellent guarantee for our future returns. I have much pleasure in proposing that the report and accounts be received and adopted.

Mr. JOHN TAYLOR said: I shall be very glad to second the resolution, and I do not think I have on this occasion much to say about the mine. You have a very full description of the work which has been carried out in the report of Mr. Tonkin and his assistants. There are, however, two special points which I might notice. One is in regard to the San Felipe's section of the company's property, where very rich ore has been developed in the 40 fathom level east of the Santa Agueda shaft. It is worth 4 tons per fathom. The winze sunk from the 20 fathom o the 40 fathom level went through a lode averaging 3 tons, and the winze sunk from the 40 fathom to 60 fathom level passed through ground worth 2 tons. Undoubtedly some very good ground has been opened up. At La Venturera in the 100 fathom level east of Judd's engine shaft there is a splendid lode which has so far been proved for a length of 22 fathoms to be worth 4 tons per fathom. This looks, as Mr. Tonkin states in his report, full of promise for the ensuing half-year, and we can undoubtedly look upon the prospects as most decidedly hopeful.

The resolution was unanimously carried.

The CHAIRMAN then moved "That the sum of £400 be written off the profit and loss account, and placed to the credit of the buildings and machinery account."

Mr. DONAGAN seconded the motion, and it was agreed to.

The CHAIRMAN proposed the re-election of Mr. Edward J. St. John as a director.

Mr. SIMMONDS seconded the proposition, and it was carried.

Mr. JUDD moved the reappointment of the auditors, Messrs. J. W. Jepps and S. J. Wilde.

Mr. DOWSON seconded the resolution, which was carried.

Mr. JEPPS proposed a vote of thanks to the Chairman, directors, manager, and staff, and was glad to know their prospects were so exceedingly cheerful.

Mr. JUDD seconded the motion, and it was unanimously agreed to.

The CHAIRMAN having responded to the compliment, the meeting concluded.

DURBAN ROODEPOORT GOLD MINING COMPANY, LIMITED.

The eighth ordinary general meeting of shareholders in the Durban Roodepoort Gold Mining Company (Limited) was held on Thursday, at the Cannon-street Hotel, the chair being occupied by Mr. JOHN BRINTON.

The SECRETARY having read the notice conveying the meeting,

The CHAIRMAN, in moving the adoption of the report and accounts, said they had erected 20 stamps of a heavier and improved type capable of dealing with the harder rock, with the result that their expectations had been exceeded. Those satisfactory results would even have been much better had it not been for the trouble they encountered in the scarcity of native labour, the deficiency during the year throughout the Rand being estimated at not far short of 30,000 natives. This scarcity of labour continued more or less throughout the whole year, but particularly during the last two months, when it was more acutely felt than at any previous time, causing the company's profits, which during September and October reached the highest figure, to fall back. The board expected the mill to deal with an average of about 8000 tons per month during the year, but the actual tonnage crushed was 101,380 tons, which produced 47,371 ounces, both the quantity and production being a considerable increase over that of the previous year. With regard to the results from the cyanide works, 79,470 tons were treated at the vats, yielding 21,348 ounces. The results for the year were that the revenue from all sources exceeded that of the previous year by about £22,000, but the average value per ton was about 9d. less. On the other hand, there was a decrease of 1s. 10d. per ton all round in the expenditure. The profit for the year, after allowing the sum of £20,000 for depreciation, was £69,395, which, with the balance of profit of £13,174 brought forward, left an available profit of £82,470. Of this sum, £75,000 had been distributed in quarterly dividends of 15s. each, making 60s. for the year, whilst they had carried to the credit of the current year the balance of £7470. The total amount distributed in dividends since the company's formation amounted to £323,583, or nearly three times the amount of the capital. The development of the mine had been well pushed forward during the year, with the result that the quantity of payable ore ready for stoping, and on which the development had been paid for on December 31 last, had reached 167,332 tons, an increase over the quantity at the end of 1894 of nearly 20,000 tons. To review the position of affairs at the present time would necessitate a reference to events of recent occurrence, which very seriously affected the whole Rand mining industry, but more particularly the mines in their locality—that is, to the west of Johannesburg, on the line of railway from Krugersdorp, where the hostilities took place, the final battle having been fought within a short distance of their mine. Their general manager was careful not to involve either the company, himself, or those with him, in any of the disturbances which followed, and he and his staff were deserving of very great commendation for the position they maintained during a period of very considerable excitement and danger when they found themselves in the midst of hostilities. The returns for February and March had, however, been very much better, and they hoped they would continue to improve. The estimated profit for the first quarter of the current year, though better than they expected, fell considerably short of what they had for some time been earning. In conclusion, the Chairman said he was sure the shareholders would recognise that mining enterprise in South Africa had not been enjoying a very golden period of late, owing to the political considerations which has disturbed the country, but it was sufficient for them to remember that their affairs were going on very satisfactorily, and that they possessed a very valuable property. And when the present difficult times were over, they would be able to look back with satisfaction to the fact that no effort had been wanting upon their part to ensure the return which was due to the shareholders for the very excellent property in their possession.

Mr. ARCHIBALD PARKER seconded the motion, which, after a brief discussion, was carried unanimously.

The retiring directors having been unanimously re-elected, and the auditors reappointed, the proceedings terminated with a vote of thanks to the Chairman.

RIO TINTO COMPANY, LIMITED.

The 23rd ordinary general meeting was held at the Cannon-street Hotel on Thursday, for the purpose of receiving the directors' report and statement of accounts, for the declaration of a dividend, and for other purposes.—Mr. HUGH M. MATHESON (Chairman of the company) presided.

Mr. GEO. N. THOMSON (secretary) read the notice of meeting.

The CHAIRMAN: Gentlemen—We have entered so fully in the report into the various facts that are of interest to the shareholders that it will not be necessary to detain you long to-day. The conversion of the mortgage debt into a 4 per cent. security was very successfully carried through, with the co-operation of Messrs. Rothschild, and has resulted in a saving of £64,000 for 1895, and of £74,000 for this and following years. This is equal to 2¼ per cent. on the share capital. We have already written off £50,500 from the cost of this operation, and will continue to appropriate the amount of drawn bonds to this account until the whole disappears. It will be observed that the sinking fund on the new bonds begins to become payable at mid-summer this year. Our production of mineral is maintained at the full figure reached some 10 years ago, and the consumption of export pyrites is 33,000 tons above the highest amount previously attained. The copper contents of the ore taken from the mine were 2·821 per cent., or about the average of former years, and the total quantity of copper brought to market and realised was 31,296 tons. As usual, the copper at the company's works and the copper in transit and in process of manufacture have been carried over at cost price. You will be gratified to learn that, as the result of economies introduced at the mines, to which I referred last year, the costs of production have been materially reduced. We have felt it right to make our shareholders acquainted with the prospects of the mine, as the result of the most careful study of the quantity and quality of the mineral opened up by the exploration works we have uniformly carried on. During the 20 years of the company's working we have extracted 23 millions of tons of ore from the mines, and our manager estimates the quantity now opened up to be no less than 135 millions of tons. Of this it is estimated that about 35 millions will be poor in copper, leaving 100 millions of tons of a quality well up to the average of the last 20 years—sufficient at the present rate of output for 70 years' supply. Please to note that this estimate is of the ore practically in sight, and takes no cognisance of the masses of mineral that have yet to be explored. The large reserve heaps of washed mineral lying on the ground now contain 106,000 tons of copper, and, as you are aware, yield the metal gradually. They stand in the books at £4 7s. per ton of copper—a price greatly below their value. In last year's report they stood at £5 0s. 6d. per ton, and though there has thus been a reduction of 13s. 6d. per ton, the board do not contemplate carrying the reduction further. It is satisfactory to know that there is an abundant water supply in the company's reservoirs for the working of the year. Till recently the traffic on our railway was strictly confined to the company's produce down, and to the stores, &c., on the upward journey. The board having had many applications made to them to make the railway available for public traffic, have at length, as we told you last year, consented to make the change. The line was accordingly opened to the public in September last, and all has gone favourably, giving the company an additional income, which has met our expectations. As regards the copper market, there has already been, in the four months that have all but closed, a distinct advance in price over that of last year, and if prices are to be governed by consumption and available supplies, everything surely points at further improvement. We, therefore, consider we are warranted in looking forward to favourable markets during the remainder of the current year. I close my statement by moving:—"That the report and accounts now submitted be received and adopted."

Mr. J. J. J. KESWICK (Deputy-Chairman): I beg to second the motion, and it was carried unanimously.

The CHAIRMAN: I should be glad if anyone present has any question to ask or any remark to make, which it may be in my power to answer or to explain before putting this resolution. As no one rises, I will put the motion to the meeting.

The CHAIRMAN: I beg next to move: "That a final dividend of 12s. per share, making, with the interim dividend paid in November last, 22s. per share, or 11 per cent., for the year 1895, be now declared, payable on the 9th prox., free of income tax."

Mr. JOHN MACFARLAN seconded the motion, which was carried unanimously.

The CHAIRMAN: I have further to move: "That the retiring directors, Major-General Arthur E. A. Ellis and Mr. John Macfarlan, be re-elected directors of the company."

Mr. WILLIAM DUFF BRUCE seconded the motion, which was carried unanimously.

Mr. JOHN THOMSON: I have much pleasure in moving: "That the retiring auditors, Messrs. Turquand, Youngs, and Co., be re-elected for the ensuing year."

Mr. GEORGE BARBOUR seconded the motion, and it was carried unanimously.

The CHAIRMAN: Mr. Young has favoured us with his presence to-day, and I am not sure that we have seen him at an annual meeting before. If he has a word to say, I am sure we shall be glad to hear it.

Mr. YOUNG: I think that after an absence of 23 years—that is the period during which the company has existed—it is not out of place that I should come here to thank the proprietors of this great company for the confidence they have placed in me during the whole of that period. It has been a period during which we have had sometimes a little difference of opinion about the accounts, my point always being to recommend the directors to write off large sums from the expenditure—not always an agreeable operation, but it is one which I have recommended at the closing of each year, and I think it is to that we are indebted to-day for closing the present year with the substantial cash balance in hand of £422,000. If this expenditure for opening up the mine were not replaced out of profits, the money would still be outstanding, which is slowly coming back—in fact, I may say quickly; and I suppose that if this rate of writing off should go on—and I earnestly hope the board will continue the good work of writing off—that we shall have another £400,000 in the course of two or three years, because I see that the total writing off this year, including £25,000 carried to reserve, really amounts to close upon £160,000. That is a very substantial sum to write off. It is a very solid sum of money which includes the redemption of the bonds as applied to writing down the cost of the last issue, which has been a most magnificent operation, reducing the charges upon the company by about £74,000 a year. I am glad we see so much coppe before us as 135,000,000 tons. As we have been only raising 1,000,000 tons a year, that looks like taking 100 years to get

of it, and turning it into money—a task that will give the directors amusement for a great number of years to come. (Laughter.) I congratulate you all on the balance-sheet you have to look at to-day. It is, as far as I am able to judge, and I never like to speak of anything without having looked into it, a most substantial balance-sheet, and I say so with the more confidence inasmuch as we were invited to visit the works a year or two ago, and look into the accounts. On that occasion, taking advantage of very valuable suggestions made by the Board with regard to remodelling the accounts as then kept, we succeeded with their entire approval in reconstructing those books in such a manner as very largely to reduce the cost of working. I do not like to say by how many thousands pounds, but, perhaps, £10,000 a year will be saved by the remodelling of those books, and greater satisfaction will be afforded to the minds of the directors, because they will be able to see better what is really being done. I thank you very much for this vote, and hope we shall have the pleasure of meeting again at some future day. (Cheers.)

Mr. GEORGE BARBOUR: I have much pleasure in moving the next resolution:—"That the best thanks of the meeting be given to Mr. Matheson for presiding over this meeting." I am sure that, however pleasant it may be to the shareholders to receive an increased dividend, and to hear the advisable position of the mine, it is, if possible, still more pleasing to the Chairman to be able to place such a report in our hands to-day. (Cheers.) During the period this company has been in existence it has had its ups and downs, and I have no doubt Mr. Matheson has had many anxious days, and possibly some sleepless nights, but I hope that now the position is what it is, we may see Mr. Matheson presiding over us for many years, and that nothing but sunshine may be cast upon the company in future. The small number of shareholders present to-day shows the confidence they have in the board and in the Chairman, for we know that if there had been the slightest weak point, there would have been many here to find fault. But as it is they cannot make any complaint whatever. Many of us hold our shares partly from regard to the strength of the company, partly on account of the board, and largely out of our respect for the Chairman, and I have great pleasure in proposing the motion.

Mr. D. NATHAN seconded the resolution, which was carried unanimously.

The CHAIRMAN—Gentlemen, I cannot say how grateful we are for the kindness you have shown us. We are very much gratified by your presence to-day, and I thank Mr. Barbour for the kindness of his remarks. He is one of my oldest friends, as his father was before him. We shall do our very utmost for the shareholders in the future as we have done in the past. (Cheers.)

The meeting then closed.

CITY OF LONDON GOLD MINES, LIMITED.

The statutory meeting of this company was held at the Cannon-street Hotel on Thursday last, April 30, Mr. J. J. VALE presiding.

The SECRETARY (Mr. H. Carlton Lovick) having read the notice convening the meeting,

The CHAIRMAN said: Ladies and Gentlemen—This is the first general (or statutory) meeting of the company, which, as you all know, is called to comply with the Acts governing public companies, and which must be held within four months of the date of incorporation. Coming so soon as it does after the formation of the company, it does not allow any great time for obtaining information, especially when the properties under consideration are at such a distance from London. The company was registered on January 2, 1896, and the allotment took place on the 10th of that month. Subscriptions were obtained which provided a working capital of £26,000, which the directors consider will be sufficient for the purposes of the company. As, however, £6,000 of the total capital was set aside for providing working expenses, there remains 25,000 shares, which are held in reserve for future issue if found necessary. The leases have all been duly conveyed, and the properties registered in the name of the company. Now, as regards the work at the mines, owing to the general exemption granted by the Government of Western Australia, it was difficult to obtain labour until nearly the end of February; therefore, the mines manager had to be content with a minimum number of workmen, and the work done consequently has not been as great as it otherwise would have been. The board have appointed Messrs. Bewick, Moreing, and Co. to act as consulting engineers. This appointment was only made a fortnight ago, and we are now waiting for their full report as to the future mine operations, which will be mailed to us in due course. The best use that could be made of the labour at the company's command was first to proceed with the sinking of the water shaft, as until water is reached mining is of necessity very expensive, seeing that water costs about 6d. per gallon to buy; and, moreover, until it is ascertained what quantity of water the company has at its command, it is impossible for the directors to form any opinion as to the class of machinery to erect for treating the ore. This water shaft is now down 155 feet, and we expect to reach the water level in another 50 feet. The amount of sinking that has been done by the company since it started operations has been 1,000ft., about, in this water shaft alone, which, under the circumstances, is very creditable work. I will now proceed to read you some extracts from the recent reports received from the engineer, and from which you will be able to ascertain the position. Mr. G. Fearby, I must mention, is the engineer who has reported on the property, and took charge of the mining operations and acted as the consulting engineer of the company during the absence of Mr. Gray from the fields. The following is an extract from a letter received from him, and dated February 1 last:—

"I went all over the workings that have been carried out since I left for Albany. I find there is now 100 feet of driving done to the south of the crosscut at the 100 feet level and 45 feet to the north, making a total of 145 feet of driving at this 100 feet level. Opening up the reef to the south there is an average thickness of 4 feet, and from 1 foot to 1½ foot of casing, showing good gold all the way. To the north the reef will average 6 feet wide, with the same thickness of casing—namely, from 1 to 1½ foot. At the 60 feet level the reef has been proved for a length of 100 feet to the north, in which there is a good body of stone all the way. I estimate there is now at grass 4,000 tons from this work. . . . What is wanted now is the water shaft sinking to the water and the plant erected when water is reached. I am well pleased with the developments of the mine all through."

In March 3 Mr. Fearby again wrote: "All the work done in the London Mine is progressing very well. For the last fortnight they have been sinking through very rich stone, of which a portion is bagged and put in the store room. This is met with between the 60 feet and 100 feet levels in the cross-cut, in sinking Perry's shaft, or what is now called the 'ore shaft.' The manager sent me in some stone yesterday, which was taken out from anywhere, which went remarkably well on assaying. This shaft I am sinking with all speed to the water level, which I am in hopes of reaching soon. . . . The engine and plant which I have purchased for the sawing is now erected. . . . I am very pleased with the outlook of this property."

Mr. Gray, having arrived at Coolgardie about March 20, proceeded to the mines, and on March 25 he cabled as follows:—"London—Parry's shaft (or water shaft) 122 feet deep. The average width of the reef is 4 feet. Have erected sawmill. Have discovered a vein 2 feet in width. Excellent, showing ferruginous quartz, rich ore. The mine looks exceedingly well. Expect to reach water shortly. . . . The mine has been worked most efficiently under Firth."

Mr. S. Firth, the mines manager, reports as follows, under date of February 1:—"The 100 feet level south drive have driven 10 feet for the week, making the drive 100 feet from the crosscut. Width of reef 3 feet. Rather mullocky in places. Not carrying so much gold as it did a little further back. Have sunk 4 feet for the week on the underlay (or water) shaft. Width of reef is 5 feet. Have also put ladders in this shaft this week, and I intend to put two shifts on this shaft next week, and put it down as fast as possible, probably to water level."

Under date of February 15th: "Have sunk the underlay shaft 5 feet for the week; total 78 feet. The sinking is very hard; it requires blasting. Width of reef is 5 feet. Have taken out some very good stone this week, showing both coarse and fine gold."

Under date of February 22nd: "Sunk the underlay shaft 10 feet for the week. Total depth from surface 83 feet. The sinking continues very hard. Width of reef 5 feet. Have picked out a few cwts. of good specimen stone this week, showing coarse and fine gold."

Under date of February 29th: "Have sunk the underlay shaft 11 feet for the week. Have just broke through into the drive at the 100 feet level, so I have all the workings connected with this shaft now. I am also putting in ladders in this shaft as I go down. Width of reef is 5 feet, gold showing very freely. Have picked out a few nice specimen stones this week. This shaft has proved itself very good all the way down since I started to sink it from the 60 feet level."

Under date of March 21st, and which is the last report to hand from Mr. Firth, he states: "I have sunk the underlay shaft 10 feet for the week. Total depth from surface 122 feet. Width of reef 4 feet, but stone not showing quite so much gold as it did last week. I will have the sawmill going in a day or two, then I will commence timbering the main shaft, which will be 10 feet by 3 feet 6 inches inside the timber, with two centres, making three compartments."

The directors gather from a brief cable received from Messrs. Bewick, Moreing, and Co. that the sinking of the water shaft, which is some 40 feet to the north of the main workings, has developed a reef of 4 feet in thickness, containing gold, and that the main vein has been developed to the 80 feet level, where the average width of the reef is 18 feet, and assays 2½ ounces per ton. It is estimated there are 4000 to 5000 tons of ore in sight. They recommend the water shaft to be sunk as fast as possible, and the development of the main lode proceeded with, which is now being done. The company have already purchased and erected, as above stated, an engine and boiler for small driving purposes, which will be capable of doing hoisting work and sawing mine timber. One of the most important points in connection with mining is the proper keeping of mines accounts. This has had the attention of the board, and the Gresham Gold Exploring Syndicate having erected substantial and central offices in Coolgardie, they have made arrangements with this company and other sister companies for office accommodation, and have sent out from this side an expert accountant to take charge of the books. In the company's attorney, Mr. Alfred Buttemer, the directors feel they have a valuable servant, who works hard in the interest of the company. Many of you are no doubt sufficiently acquainted with West Australia and West Australian companies to know that it is impossible to push things along there with the rapidity with which this can be done in this country. If this were attempted it would prove a very heavy and costly mode of working. The field is a new field, and consequently things move somewhat slowly. By having a little patience things will right themselves, new organisations will take place, labour will be cheaper, and railway carriage and transport charges reduced to, perhaps, one-half the cost there now, all of which must greatly tell to the benefit of those who exercise discretion and patience. I can only say, in conclusion, that the question of machinery has the careful attention of the board, who are investigating several new processes for treatment of ore, which are now being put in operation at the different mines. I thank you, gentlemen, for your kind attention, and shall be pleased to answer any questions to the best of my ability. I have just received information which I think will be gratifying to everybody in this room. This is conveyed in a short but very important telegram, dated Coolgardie, April 30, which runs as follows:—"We have struck water at 166 feet from the surface." Well, those of you who are interested in, and acquainted with, Western Australia will recognise that that is worth a very large sum of money to us. It is a most important thing for us, and for every mine in Western Australia, to have an ample supply of water, and I regard this information as being of the greatest possible value to this company. It will probably enable us to decide much more rapidly than we could otherwise have done the class of machinery most suitable for working the mine.

On the motion of Mr. SAM SPENCER, seconded by Mr. HOVENDEN, a cordial vote of thanks was accorded to the Chairman, who briefly acknowledged the compliment.

The meeting then closed.

WEST AUSTRALIAN AND GENERAL ASSOCIATION (LIMITED).

An extraordinary general meeting of the shareholders in the West Australian and General Association (Limited) was held at Cannon-street Hotel, on Monday, Mr. Harry Mosenthal presiding, for the purpose of confirming the resolutions for the reconstruction of the company, which had been previously adopted.—The Chairman said, as they were aware, the resolutions were passed at the last meeting, and now, therefore, he had simply to ask them to confirm them that day.—Mr. D. Ryder seconded the resolutions, and they were unanimously confirmed.—On the proposition of Mr. McKinley, a vote of thanks was accorded the Chairman for presiding, and the meeting then concluded.

GENERAL MINING ASSOCIATION (LIMITED).

The ordinary half-yearly general meeting of the shareholders in the General Mining Association (Limited) was held at Dashwood House, E.C., on Friday, when Mr. J. D. Hill, who presided, in moving the adoption of the report and accounts, and the declaration of a dividend at the rate of 11 per cent., said the total coal shipments during the year were less than those in 1894, while the prices had been lower in consequence of the depression occasioned by the financial troubles in Newfoundland which were reported at the last annual meeting. The profits of the year had also been reduced through the considerable outlay incurred for repairs to the wharves, &c. Therefore, he thought they might congratulate themselves upon being able, in spite of all these difficulties, to pay so large a dividend. They would see in the manager's report full particulars of the repairs and alterations carried out at the mine. In regard to the "bad debt," incurred through the financial disaster of 1894 their funds had been quite sufficient to meet the loss; but he believed that it was possible that they might get some of the money back. Speaking of the future he remarked that the outlook was very satisfactory, being of opinion that their returns would increase very substantially.—Colonel Western seconded the resolution, and it was carried unanimously.—The retiring directors, Mr. J. D. Hill and Sir Charles Tupper, Bart., were re-elected, as also was the auditor, Mr. George Briggs, and the meeting concluded with a vote of thanks to the Chairman and his colleagues.

ELMORE'S GERMAN AND AUSTRO-HUNGARIAN METAL COMPANY (LIMITED).

The fifth annual general meeting of the shareholders in Elmore's German and Austro-Hungarian Metal Company (Limited) took place at Winchester House, E.C., on Monday, the chair being occupied by Mr. John MacFarlan.—In moving the adoption of the report and accounts for the year ended last December, the Chairman stated that the directors were very glad to be able to give them a better account of the 12 months' work than on any previous occasion, the present state of affairs being very satisfactory. An important reduction had been made in the capital of the company, greatly to the benefit of the preference and ordinary shareholders. The whole of the deficit of the company, as well as that of the Metal Company, had now been written off, and the present year was started with a clear balance-sheet, if they left out the sum of £1575 brought forward by the latter concern. The trading account showed a great improvement when compared with the year 1894, the sales having more than doubled, and had the price of copper not fallen so suddenly last December the value of the copper in stock would have been much higher. To show the rapid increase in the company's business during the past three years, the Chairman gave the following figures:—In 1893 the sale of copper realised £3194 3s. 4d.; in 1894, £8130 10s. 10d.; and in 1895 £17,052 12s. 3d. This was a most substantial progress, and had proved that the Elmore process was superior to all the old ones. In regard to the present year he was pleased to say that the sales during the three months just ended were a good deal in excess of those for the same period of 1895. In conclusion, Mr. MacFarlan referred to the necessity of raising either by debenture stock or preference shares an additional £25,000 for the purpose of increasing the company's plant. Unless he explained that the directors were provided with more capital it would be practically impossible to realise enough profit to pay dividends.—Mr. John Heal seconded the motion.—Mr. Presohlin (the company's manager) having addressed the shareholders the resolution was carried unanimously.—The retiring director, Mr. John Heal, was re-elected, as also were the auditors, Messrs. Cooper Bros. and Co., and the proceedings then terminated.

AUSTRALIAN BROKEN HILL CONSOLS (LIMITED).

The adjourned extraordinary general meeting of the shareholders in the Australian Broken Hill Consols (Limited), convened for the purpose of considering the advisability of reconstructing the company, was held on Thursday, at Winchester House, E.C., Mr. H. J. Ward presiding.—The Chairman explained that the meeting was adjourned on April 16 in consequence of an amendment being proposed, which, if persisted in, would result in the withdrawal of the guarantee given by one of the largest shareholders of one-half of the capital to be subscribed under the new scheme. There had been a meeting of several shareholders held during the interval, and he believed that the mover of the amendment was now prepared to withdraw his proposal in regard to the making of the second call.—Mr. Beaumont said in view of what had taken place since the last meeting he now desired to withdraw his amendment.—After a short discussion the resolutions for the reconstruction of the company were carried, with three dissentients, and the meeting concluded with a vote of thanks to the Chairman.

LADY MONTEFIORE UNITED GOLD MINES (LIMITED).

The statutory meeting of the shareholders in the Lady Montefiore United Gold Mines (Limited) took place at the Cannon-street Hotel on Wednesday, Sir J. W. Campbell, Bart., presiding.—The Chairman said they hoped that the mines would be a very great success, but at present he had no news to give them.—Captain Dawson then described the property, which, he said, consisted of five blocks, comprising 42 acres, and was situated in the 90 mile district of Western Australia. The result of the development work, so far as it had proceeded, was that good indications had been met with, and very rich stone had been discovered. An outcrop was estimated to contain about 10,000 tons of ore, which it was calculated would yield at least 2 ounces; in fact, a portion would yield 4 ounces per ton. Splendid reports had been received in regard to the 90 mile district, which he considered would equal any other district in the colony. In addition to the property already held, the company were in treaty for Hawson's and the Red Flag leases, the acquisition of which would make the Montefiore group one of the best properties in the country. The mines were being fully developed, and there was every reason to hope that when the battery was erected good returns would be made. The supply of both water and fuel were excellent. In conclusion, Captain Dawson exhibited several samples of stone taken from the property, which were of a very rich nature.—A vote of thanks to the Chairman terminated the proceedings.

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

MENZIES GOLD REEFS PROPRIETARY (LIMITED).

The following has been sent to the shareholders:—The first year of this company's existence ended on March 31 last, and as some time must elapse before the accounts of the first year's working can be received from Australia, the directors think that shareholders will appreciate information dealing in general terms with the result of the company's first year's operations. The Menzies Gold Reefs Proprietary (Limited) was formed in April, 1895, to acquire seven leases, having a total area of 122 acres, viz.:—Robinson Crusoe, Robinson Crusoe East, Friday, Selkirk, Defoe, Nada, and Lady Shenton No. 1. In September following a separate company was formed for the purpose of acquiring the Robinson Crusoe and Robinson Crusoe East claims, the capital of which company was £200,000. The area then transferred was 44 acres. Ten acres have since been conveyed to the Menzies Gold Reefs Proprietary (Limited) by the vendors, so that there are still 88 acres belonging to the parent company. In the following October, the Menzies Gold Reefs Proprietary (Limited) (in conjunction with the Gold Estates of Australia, Limited), issued the Menzies Consolidated Gold Mines (Limited). From both the foregoing operations a considerable profit accrued to this company. The properties belonging to the Menzies Gold Reefs Proprietary (Limited) have been equipped with a 20 stamp mill, pumping and winding plant, blacksmith's shop, store buildings, dwelling accommodation, tanks, &c. Ten heads of the above 20 stamp mill are to crush for this company, and 10 heads are being loaned for six months to the Menzies Crusoe Gold Claims (Limited). The former 10 stamps commenced crushing on March 26, and the results of the first campaign were communicated to the shareholders through the Press on the 17th inst., viz.:—First clean-up, 100 tons crushed.—Yield: Retorted gold 240 ounces; tailings assay 1 ounce 2 dwts. per ton; pan slimes assay 3 ounces per ton. Blanket sand still to grind. Stone crushed from Friday claim, water shaft, and underlay shaft. Crushed slowly, stopped three days, copper plates left in good order. The 10 stamps leased to the Menzies Crusoe Gold Claims (Limited) commenced crushing on April 2, and to the latest

company has a large holding in shares in the Crusoe Company, the following particulars of the first run will be of interest, viz.:—First clean-up 130 tons crushed.—Yield. Retorted gold, 562 ounces; tailings assay, 13 dwts. per ton; assay of slimes from pans, 1 ounce 14 dwts. per ton. Expect 10 ounces more from quicksilver and pans. Stone crushed from Robinson Crusoe Claim Underlay Shaft A. During the year which ended March 31 last, a large amount of development work was done, the result of which, up to December last, had rendered available 5000 tons of quartz above the 80 feet level, and a larger amount from the 80 feet level to the 160 feet level. Since December this tonnage has been considerably increased. The following leases have practically been under exemption since their acquisition by this company, viz.:—Lady Shenton No. 1, Selkirk, Nada, and Defoe. After having developed the property to a depth of over 200 feet, equipped it with a 20 stamp battery, &c., this company has still cash at the bank amounting to £50,000, and in addition shares in the various concerns with which it is associated, aggregating 92,000 £1 fully-paid shares.

MASON AND BARRY (LIMITED).

The directors' annual report for 1895 states the total quantity of ore broken and raised at the mine during the year 1895 was 185,463 tons, as against 196,922 tons in 1894, and the shipments during the same period (inclusive of ore from the cementation works) amounted to 186,368 tons, as against 242,386 tons in the previous year. The quantity of ore sold and invoiced for its sulphur value during 1895 amounted to 189,448 tons, as against 233,729 tons in 1894. The average price of G. M. copper (including Chili bars) during 1895 was £42 16s., as against £40 4s. 6d. in 1894, £43 16s. in 1893, and £45 14s. in 1892. After writing off in the mine books for depreciation of works, plant, &c., the sum of £15,018, and allowing for the variation in the estimated value of the stocks on hand in this country, on the Continent, and in Portugal on December 31, and after deducting management expenses and income-tax, the net profits on working account have amounted to the sum of £16,155 13s., to which has to be added the sum of £8177 7s. 5d. received as dividend on La Sabina shares, and the sum of £3587 6s. 8d. from sundries, making together a total profit for the year of £27,920 7s. 1d. The stocks of ore and copper precipitate broken, raised, and on hand, December 31, 1895 (exclusive of the stocks at the Wallsend Works), are valued at £292,971. Compared with the two previous years the figures stand as follows:—

	1893.	1894.	1895.
Estimated value of stocks in England (exclusive of stocks at Wallsend Works) and on the Continent	£28,391 ..	£51,849 ..	£46,117
Estimated value of stocks in Portugal; balance of cost of ore at cementation works	321,250 ..	254,637 ..	209,316
Ore ready for shipment ..	6,564 ..	13,407 ..	18,848
Copper precipitate	39,265 ..	27,450 ..	18,690
	£386,470 ..	£347,343 ..	£292,971

The stocks at the Wallsend works are shown by the balance-sheet as valued at £1466, on December 31 last, against £3691 on December 31, 1894. The mine assets in Portugal (after writing off for depreciation) stood at December 31 at £456,907. These assets embrace the following items, and compare with the preceding two years as under:—

	1893.	1894.	1895.
Works, buildings, land, plant, &c.	£103,926 ..	£94,942 ..	£84,843
Railways, shipping piers, tug boats, &c.	73,838 ..	74,691 ..	72,082
	177,764 ..	169,633 ..	156,925
Mine stores and cash assets	53,381 ..	50,148 ..	53,128
Stocks of ore and copper precipitate (as above)..	358,079 ..	295,494 ..	246,854
	£589,224 ..	£515,275 ..	£456,907

As shown by the profit and loss account, the profit realised on the year's working amounts to £27,920 7s. 1d., to which has to be added the balance, £3651 5s., brought forward from the year 1894, making together the sum of £31,571 12s. 1d., less sundries £346 8s., and the directors having written the sum of £4500 off La Sabina shares, there remains a balance for appropriation of £26,725 4s. 1d. From this balance the directors recommend the payment of a dividend of 2s. 6d. per share, and to carry forward the sum of £3578 14s. 1d. to the next account.

KURNALPI GOLD MINING COMPANY.

The following circular, dated the 15th inst., and signed by the secretary, has been issued to the shareholders:—I am directed by my board to forward you the enclosed particulars respecting the present position of the company's property. Reports received from the mine state:—The line of reef on the western side of the lease, to which work has been up to the present time confined, runs north and south, and can be traced throughout the length of the property. It has been opened out in five different places for a distance of about 6 chains, and has produced good stone from each, carrying gold and varying as shown by assays from 1 to 7 ounces per ton. The reef all along the surface of the lease from north to south contains gold, and a few open cuts and small shafts would place at command a large amount of high grade ore. The reef varies in thickness from 6 inches to 3 feet, and all seems to hold gold. The work done consists of:—At the north end a shaft (No. 1) has been sunk on the underlay to a depth of 30 feet, and measures in the clear 6 feet by 3 feet. Going 90 feet further south (No. 2) a cutting has been put in along the line for 10 feet, 4 feet deep by 3 feet wide. Again south 70 feet (No. 3) shaft has been sunk to a depth of 33 feet on the underlay, measuring 6 feet by 3 feet. 120 feet again south (No. 4) a prospect hole has been sunk 6 feet by 3 feet by 7 feet deep. Crossing the Coolgardie road 90 feet from last point (No. 5) an open cutting 40 feet long 5 feet wide, and varying from 3 to 14 feet deep, has been made, 78 feet west of the line of reef, at the north end, a shaft has been sunk to a depth of 96 feet, and measures 9 feet by 3 feet, which is termed the main shaft. On the eastern side of the property an ironstone ridge outcrops, which the board understand is now being developed. A quantity of ore has been raised-ready for crushing, which is estimated to average over 2 ounces per ton. The company's battery arrived at the mine in August last, but owing to unforeseen delays and neglect of the board's instructions, is not yet ready for work. The board therefore started crushing at a neighbouring mill, when a few tons of ore were treated, which yielded over 1 ounce per ton on the plates; but owing to the inefficiency of the mill and management, this was not considered a true test of the value of the ore. Consequently a change in management has been effected, and a skilled battery manager appointed, with instructions to proceed with all speed to obtain crushings from the company's own battery. It is confidently expected that water will be struck in the main shaft almost immediately, the neighbouring property having a plentiful supply at a depth of 140 feet. The sum of £5000 in cash was due to the Australian vendors as part payment of the purchase price. This they have now taken in 5000 fully paid shares of the company at par, thereby receiving the entire consideration for the property in shares. The company has at the present time sufficient funds at its disposal for carying on the necessary work. In conclusion, judging by the developments of the mine and the report of Captain Vialls, employed by the company to examine the property, your directors are confirmed in their opinion that the mine is a good one, and will pay well. The shareholders will be kept informed from time to time of the progress made.

FRONTINO AND BOLIVIA GOLD MINING COMPANY.

The directors in their report state that they have received advices from the temporary superintendent, who was appointed by Messrs. Restrepo, as mentioned in the last circular, dated February 25, being the day after he entered upon his duties, and also advices dated March 10. They have received letters from Messrs. Restrepo, dated February 12 and March 12. The statement for the month of February is as follows:—3112 tons produced, bullion, 1739 ounces; tributers' gold produced, bullion, 147 ounces; total, 1886 ounces; also 84,784 lbs. of sulphurets, valued at £483 15s. 9d.; estimated value of the gold and sulphurets, £5066 7s. 9d.; cost at the mines, Medellin, and in London, £7541 7s. 11d.; estimated excess of expenditure, £2475 0s. 2d. In addition to the above cost of £7541 7s. 11d., certain sums, amounting together to £451 13s. 4d., are set out as liabilities, but as these sums are disputed, they have not been included in the above statement. Seeing that the expenses in London for March may be calculated at £240, the profit for that month will come out at £824. Information may be expected by any mail of the breaking up of the dry season, with a consequent improvement in the returns. The directors have engaged the services of Captain John Penberthy as superintendent, and he will sail for Colombia by Royal Mail steamer from Southampton, May 6. Notwithstanding the recent drop in the returns, and the very heavy costs, the directors believe that there is no reason for any anxiety on the part of the shareholders.

— The EXPLORATION COMPANY (LIMITED) announce that, according to advices received from the ANACONDA COPPER MINING COMPANY, a dividend of 62½ cents per share has been declared. The same will be paid by them on and after May 1 next, in exchange for coupon No. 1, at the rate of exchange of 4s. ¼d. per dollar. Printed forms to be applied for, and the coupons left three days for examination. The dividends in future will be declared half yearly, in April and October.

— Share certificates for transfer in connection with the RANDFONTEIN ESTATES GOLD MINING COMPANY were lodged for registration up to January 7 last are now ready for delivery by the London agents, the Robinson South African Banking Company (Limited), 1, Bank Buildings, Lothbury, E.C.

— The cheques in payment of dividend No. 9 of 30 per cent. have been despatched from the London office of the JUMPERS GOLD MINING COMPANY (LIMITED) to all shareholders registered on the books of the company on February 25.

— A dividend of £25,000, being 6d. a share for the month of April, is payable on May 1 on the shares of the MOUNT MORGAN GOLD MINING COMPANY (LIMITED).

— The statement of the FRONTINO AND BOLIVIA GOLD MINING COMPANY (LIMITED) for the month of February is as follows:—Estimated value of gold and sulphurets, £5066 7s. 9d.; estimated cost, £7541 7s. 11d.; estimated excess of expenditure, £2475 0s. 2d.

— The RIO TINTO COMPANY (LIMITED) invite holders of share warrants to bearer to present coupon No. 35 for the dividend of 12s. per share, to be paid on the 9th inst.

MENZIES GOLDEN RHINE GOLD MINES (W.A.), LIMITED.

The PROSPECTUS of the Above COMPANY will be Advertised on WEDNESDAY NEXT.

BANKERS.

BROWN, JANSON, and CO., 32, Abchurch Lane, E.C.

BROKERS.

HOLLEBONE BROTHERS and TRENCH, 18, Birchin Lane, E.C.

SECRETARY AND OFFICES.

W. C. GOULD, Worcester House, Walbrook, E.C.

PARIS LETTER.

(FROM OUR OWN CORRESPONDENT.)

Influence of the Transvaal Crisis on Kaffir Shares.—Movement for Protecting French Interests in Rand Companies.—Mining Enterprise in Madagascar.—Dubious Results of Gold Mining in Siam.—Serious Riots at the Laurium Mines.

THE sudden and alarming change which has come over the Transvaal question as the result of the extreme sentence passed upon the Reform leaders incarcerated at Pretoria has had for the moment a serious influence upon the Kaffir market in Paris. It is urged that the capital punishment inflicted is out of all proportion to the gravity of the offence for which they were arraigned, and it is feared that in the event of the penalty being meted out it will provoke the gravest complications between England and the Transvaal. Immediately on the news of the condemnation being made known, lower quotations for South African scrip were cabled over from London, and timid holders began to dispose of their shares with as much haste as possible. They were, however, readily taken up by buyers who still maintain a great deal of confidence in the future, which they hold to be perfectly justified by the certainty of Mr. Kruger commuting the sentences passed upon Mr. Lionel Phillips and his friends. At the same time, no one can overlook the fact that the severity of the Boer Government tends to throw the whole financial system of the Rand out of gear, and to act as a serious impediment to the development of the gold mining industry. Not only are the capitalist classes paralysed, but the small investors who hold by far the greater bulk of the shares sustain heavy losses through no fault of their own. It is for this reason that President Kruger is exhorted to show a little more moderation towards those implicated in the late troubles, and not precipitate a state of things which must inevitably bring ruin upon the mining industry.

While the outlook may be far from encouraging for South African securities, there is little disposition on the part of French investors to be led away by a feeling of undue pessimism. Now that Mr. Kruger has given formal promise to commute the death sentence upon the Pretoria prisoners, one of the chief causes of depression is removed, and investors affect to believe that with the exercise of a little patience the mining market will, in course of time, recover its former tone of confidence. In this hope they are still purchasing the leading shares with a fair amount of freedom, though their selection of scrip is subordinated to the work reported to be done at the mines, and to the prospects held out of the payment of remunerative dividends. It would, indeed, assist materially in upholding the French market if the different mining companies were a little more communicative as to the progress of operations on the Rand. Investors complain that they are left entirely in the dark as to the work of development being undertaken by the concerns in which they are interested, and are thus at the mercy of speculators who are able to disseminate false reports with some chances of their obtaining credence. In order to place investors on their guard against such manœuvres, the principal shareholders in some of the companies are making arrangements for the formation of committees which will look after their interests, and obtain trustworthy information as to what is being done at the mines. Such a committee has just been formed among the shareholders of the Buffelsdoorn Estate and Gold Mining Company, and before long the investors in all the leading concerns will be grouping themselves together for their common interest.

The amount of business done on the Bourse this week has not been large, and is chiefly confined to a few of the gilt-edged securities which have been purchased lately on London account. East Rands have been in most request, and there has also been a good call for Consolidated Gold Fields, on the strength of rumours that the quotation of this scrip was likely soon to undergo a big advance. Most of the other shares are weak, and have declined a few points. On Thursday the prices of the shares dealt in were: Buffelsdoorns, 70 francs; Champ d'Or, 58 francs; Chartereds, 88 francs; East Rands, 174 francs; Ferreiras, 501 francs; Geldenhuis, 105; Gold Fields, 312 francs; Kleinfonteins, 102 francs; Langlaagte, 140 francs; Robinson Mines, 237 francs; Shebas, 53 francs; and Transvaals, 54 francs.

According to the reports issued by the Suberbieville Gold Mining Company a great deal of activity is being displayed in opening up the auriferous deposits on the west coast of Madagascar. Quite a large fleet of steamboats and tugs is being concentrated at Suberbieville and Majunga, which are now put into daily communication, and work is being pushed forward as rapidly as possible for the recovery of gold. Already operations have been started upon the alluvial deposit at 50 different places in the vast territories of the Suberbieville Company, and the engineers are now repairing the shafts and galleries of the old mines which have fallen into partial decay during the two years that they have been abandoned. Surveys are also being made for the railway, for which the material has already been received, and sites are being prepared for the erection of excavators that will be set to work upon the alluvial deposits as soon as possible. The directors have the greatest confidence in the remunerative character of the work undertaken by the company, not only in gold mining, but also in the general development of the country under its domination. In this task of opening up Madagascar the Suberbieville Company is finding powerful collaborators in the several other concerns now being formed, either independently or as an off-shoot of the company. Among these is the Compagnie Coloniale de Madagascar, which has been floated by the Comptoir National d'Escompte, the Société Générale, the Crédit Industriel, and the Société Marsellaise. The capital of this new concern is 1,000,000 francs. The readiness with which money is subscribed for such undertakings is sufficient proof of the renewed interest which French investors are taking in development and mining enterprises abroad. This activity is further manifested by the delegation of engineers and other experts to Australia, America, and elsewhere, for the investigation of undertakings in which capital may be safely placed. This week Mr. Raphael Georges Levy and Mr. Hamilton Smith, both directors of the Compagnie Française des Mines d'Or have left for America with instructions to examine into the scope and prospects for the investment of French capital in the mining enterprises of that country.

Shareholders in the Watana Gold Mining Company in Siam are by no means satisfied with the prospects of this concern. Formed two or three years ago, under circumstances which recall the flotation of the Londonderry Mine, the shares rose rapidly to more than 1000 francs, but since then the results have been so far from coming up to expectations that the quotation has fallen to a 10th of that figure. What tends to weaken the confidence of shareholders is the total ignorance in which they are kept by the directors, who refuse to publish even the most meagre information, unless it be couched in such vague terms as to make it entirely valueless. Several months ago the enthusiasm of shareholders was cooled by the reports

of independent engineers who damned the property with faint praise, and, while asserting the existence of gold, suggested that a good deal of prospecting would have to be carried out before a definite pronouncement could be made. Though it is stated that the work of opening up the mine has been proceeded with, nothing has yet been made known as to its auriferous value, and people here are fast losing confidence in the existence of gold deposits that were held to be as prolific as the riches of Pactolus.

The French company which is exploiting the silver and other deposits at Laurium, in Greece, is passing through a bad time in consequence of the rioting of the hands employed in the mines. The men have for some time past been insisting upon certain privileges, notably, an increase in wages, and the establishment of a hospital, and it is probable that these demands would have been acceded to, if the miners had not suddenly struck work and attacked the officials with extraordinary fury. The director of the mine, M. Fernand Serpieri, and the engineers, were attacked with stones, and on the police coming to their assistance and firing on the miners, the fight became general. The officials sought refuge in the offices, and these, as well as the warehouses, were set on fire. The directors and engineers owed their lives to the prompt intervention of the Mayor of Laurium, M. Negris, who is himself a mining engineer, and they were conveyed under his protection through the crowd of rioters. The offices and warehouses, containing a great deal of mining material, were burnt to the ground.

CORRESPONDENCE.

*** We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.*

THE EXPERT WITNESS.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—A proposal in *Nature* of April 23, to forbid the evidence of any but official scientific experts in courts of law, is now added to the projects on which I have animadverted in your pages. It exactly fits and completes the other projects of its promoters, and it is stated to have acquired the advocacy of the *Times* and *Globe*.

When a Panama case occurs in England, the scientific Press will have been, as I have previously pointed out, entirely gagged; the scientific colleges will have been crammed with paid students; the Universities will have been subjected to an Imperial Institution; the British Association will be a place for bringing men's names before the public; the courts will admit only experts supplied by the same machinery; and the entire system will be worked by a dozen authors of the strangest jobs of recent years. Any independent opinion on scientific matters will then be impossible, and science as a profession will be exclusively supplied by "a ladder from the gutter to the University."

In mining cases the quality of the deliverances of the official expert can be imagined. Guided by a first-class certificate in mining, he will lay down those unanswerable arguments with which every mining man is sadly familiar. The demonstrable ignorance of the practical man will be only equalled by his theoretical blindness, and he can expect no difference of opinion in his favour. Any such difference would scandalise the promoters of reform.

"The fact," says *Nature*, "that scientific men, some of them even of high standing, can be procured to sustain the most contradictory views is, we have no hesitation in saying, hurtful to the interests of science, and tends to degrade science in the opinion of the public." This scandal is to be put a stop to. No scientific man will be allowed high standing unless he consents to repeat always, and especially in court, the lesson he has learned. As in the pages of *Nature*, he must either say what is in fashion or be silent. It is hurtful to the interests of the scientific profession, and even tends to degrade it, that different men should hold different views. If "Bathybius" has been promulgated to the working classes as "the master pillar of modern evolution," no difference of opinion can be allowed. Outsiders may write little letters on the eggs of the cuckoo, or the dimensions of the gooseberry, but science consists in repeating, with due fear and trembling, those *dicta* which are dispensed at South Kensington together with 25s. a week.

Comment is needless. In the case of Gallileo I believe that the court did not go so far as to "insist that a scientific expert should not be called by a particular side." In that case, however, the experts were certainly chosen from the South Kensington of the day. The same process is to be now applied in all the details of science that was formerly reserved for startling and exceptional cases. The political, legal, ethical, historical, and other views of the late leader of South Kensington will probably be fully appreciated by Englishmen as they are carried into practice. My opinion of them in a special field will then be better understood.—Yours faithfully,

P. W. STUART-MENTEATH.

April 25.

COMPLETE AND CHEAP GOLD EXTRACTION.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—Your notice of the use of the dichloride of sulphur (S_2Cl_2) by M. Rigaud, in France, is most interesting, but not so much on account of the description of the process itself as from the fact of its drawing attention to, and fully supporting, Admiral Selwyn's far superior process—"The Zymean Process"—for the use of S_2Cl_2, which is more simple, more practical, and far more economical.

Admiral Selwyn's process is the use of S_2Cl_2, but he employs it as a means of producing a continuous of nascent chlorine in a saturated solution of salt and water. The metals are taken by means of the sulphur of the ore into solution as chlorides, not during the work of hours, but minutes. The continuous production of nascent chlorine in the saturated solution of salt and water is incomparably greater in quantity and more effective in solution than the small amount of free chlorine that can be held in the S_2Cl_2, and requires no complicated machinery, but simply water vats to hold the ore in course of solution and for precipitation.

Admiral Selwyn's Zymean process, it is calculated, should, on the basis of working 200 tons per diem, extract gold from its ores at a cost of about 1s. per ton, taking the whole of the metals out of the ore.

The introduction of this process to general use bids fair to even more than double the value of every gold share in the market, and to work low-grade and refractory ores at a living profit, for at one operation it brings every metal present into solution to be afterwards separately precipitated and recovered chemically pure.

M. TWEEDIE, Major-General.

April 24.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—With reference to Mr. Hugh K. Picard's communication in your last number on the subject of M. de Rigaud's gold-saving process, he seems to be quite mistaken as to the aims, objects, and results of the chloride of sulphur or Zymean process.

(1.) There is no difficulty whatever in making the di-chloride of sulphur, and still less in handling it when made. It can be made from the waste products of the treatment of the ores, at the mine, and therefore at no expense for chemicals or transport. (2.) S_2Cl_2 not only is decomposed itself, but decomposes the water with which it is in contact, and produces from it free oxygen and free hydrogen, and thereby supplies the absence of manganese dioxide as ordinarily used in the manufacture of chlorine. (3.) Not only is roasting never needed, but the whole process would be spoilt if the sulphur were not left in the ore, for then no sulphuric acid could be formed, and no nascent chlorine could be continuously evolved. The ores tested have always been chosen among the most refractory that could be found, and have often been such as no known process could deal with in the raw state. (4.) All of the metals and metalloids are extracted, which are contained in any ore, not gold only, and this may be done at the mines without waiting till railways find it to their interest to carry the ore away. (5.) The finest crushing that will not produce slimes is the most advantageous, but a mesh of 40 holes to the linear inch is generally sufficiently fine, and this is much less fine than is used in amalgamation. (6.) Mr. Picard will see that the difference both in results and cost differs widely from any existing chlorination. It is the same with the time occupied, which is incomparably less.—Yours truly,

HENRY TAPP, Mining Engineer.

The Laboratory, 20, Bucklersbury, London, E.C., April 30.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

ALADDIN'S LAMP.—The following cablegram has been received from the superintendent at the mines: "Four weeks return totals 986 ounces of gold (approximate value £3620)—viz., 251 tons of ore have been crushed, yielding 604 ounces, and 4 tons rich crude ore have been shipped containing 382 ounces." The directors have declared an interim dividend of 1s. per share, free of income-tax, payable on May 9. The transfer books will be closed from April 29 to May 9 inclusive.

AFRIKANDER.—The following cable has just been received from the mine:—"A plentiful supply of labour is now obtainable."

ALASKA TREADWELL.—Cablegram from Alaska reports the clean up for the month of April as follows:—"Period since last return, 31 days; bullion shipment, $46,867; ore milled 22,114 tons; sulpurets treated, 347 tons; of bullion there come from sulphurets, $14,759; gross expenses for period have been $27,469."

BRADLEY PIONEER.—Extract from cablegram received from the head office in Denver:—"Have purchased Mountain Chief adjoining Tom Boy, for Bradley. Bradley vein better every foot; big soft crevice of ore and losts of galena. $250,000 worth can be taken from present openings in Mountain Chief. Have contracted for 100 ton mill."

BIG BLOW.—A telegram received from Mr. Vivian on Friday in last week announced that the water supply now admitted of 10 heads being run seven hours per day.

BONNIE DUNDEE.—The directors have received the following cablegram:—"Have started to sink the No. 3 vertical shaft. Have 500 tons of quartz at grass, estimated to yield 30 dwts. per ton. Start to crush May 12."

BARBERTON GOLD FIELDS (South).—The following cablegram has been received from the manager of the mines:—"Have made rich strike in rich and visible free gold."

BRILLIANT CENTRAL.—The following cablegram has been received from the directors in Charters Towers:—"The directors have made a call of 3d. per share, payable in Charters Towers on July 4 next. Forfeiture for non-payment 26 days (clear) after payable date, in accordance with the provisions of the No Liability Clauses of the Companies Acts. All shares upon which this call may not have been paid on or before July 30 will be forfeited."

BROKEN HILL PROPRIETARY.—It is reported that the available yield for the week ending April 30 was 8882 tons of ore, yielding 455 tons of lead, containing 145,421 ounces silver. The price of the shares in Melbourne is £2 9s. 6d. buyers.

CHAMPION REEF (Nannine, W.A.).—Translation of cable received from the local secretary, Melbourne, and dated April 26:—"We are now sending a necessary stock of stores, including electric installation to be carried out, light the mine by electrity, light the mill by electricity.

CITY OF LONDON MINES (W.A.).—The following cable has been received from the mines, dated April 30:—"We have struck water (at a depth of) 166 feet from the surface."

COROMANDEL.—The London office has received a telegram from the mine, dated May 1, giving last month's return of gold as follows:—"Crushed 900 tons; obtained 452 ounces of gold."

CUMBERLAND.—The following cablegram has been received:—"Tailings works recovered 188 ounces from 204 tons, at a cost of £250; the estimated value is £400."

CLYDE.—Advices received state that lease 416 has been secured as machinery area. The company's dam is quite full of water. Crosscutting the lode at the 200 feet level.

EMERALD (Reward).—The following cablegram has been received, viz.:—"Tons milled, 43; producing 44 ounces."

EJUDINA.—The result of recent samplings in No. 3 shaft are as follows:—No. 1 from bulk sample, taken every 3 feet in north drive, 3 ounces 6 dwts. 15 grains. No. 2 from bulk sample, taken every 3 feet along south drive, 4 ounces 19 dwts. 7 grains. No. 3 from bulk sample, taken every 3 feet from the No. 3 shaft, 6 ounces 4 dwts. 3 grains. No. 4 from combined sample from the above-mentioned, 5 ounces 14 grains.

FREDERICK THE GREAT.—The following cablegrams have been received, dated Bendigo, April 25:—"Specks of visible free gold 680." Bendigo, April 27:—"680 ore improving in quality as developed; payable."

GINSBERG.—The Johannesburg Consolidated Investment Company announce receipt of the following cable from the above company:—"Struck rich reef in main shaft. Reef is 16 inches wide, assaying 10 ounces to the ton."

GREAT BOULDER PROPRIETARY.—Crushing returns for the fortnight ending April 25 as per cablegram received from the manager:—"At company's own battery, Great Boulder Mine, 10 stamps, 357 tons, 1438 ounces; at company's battery, Lake View Mine, 10 stamps, 350 tons, 1094 ounces; at public leased battery, 5 stamps, 225 tons, 633 ounces; total, 932 tons, 3165 ounces."

GREAT BUNINYONG ESTATE.—Ballarat, March 23: Contractors for erecting alluvial plant just about completed. Good progress making at the quartz shaft. Now preparing for opening first level. Shall commence cutting chamber to-day.

GOLDEN CEMENT CLAIMS.—Cable advice has been received from the company's agent at Perth, as follows:—"One ton treated. Brand's battery yielded 3 ounces 6 dwts. per ton tailings 16 dwts. per ton. The battery referred to above is a trial plant which Dr. Albano Brand, the representative of the Anglo-German Exploration Company, took out with him."

HANNAN'S REEFS.—The manager, under date of April 20, cables as follows:—"Rough assays from the ore from this property have given a result of 2 ounces 11 dwts. of gold per ton. Reef shows visible gold."

HANNAN'S STAR.—The directors have received cable advices from the mines' superintendent, intimating that in the crosscut going west from James' shaft, which is being driven to cut the Boulder main reef lode. The country looks exceedingly well for reef formation, and that the work is being vigorously pushed on in every department. The superintendent also informs them that the west shaft is now yielding 3000 gallons of water per diem.

HERBERT.—The following cablegram has been received from the managing director at Coolgardie:—"Trial crushing during next week. The ore is 6 feet thick, still richer."

HARQUAHALA.—The following cablegram has been received from Mr. Raymond (Kalgoorlie, W.A.):—"Crosscuts are in 120 feet east and 100 feet west of main shaft, nothing in sight. Shall continue Harvey's shaft, and commence crosscutting there on the 125 feet level."

HAURAKI (N.Z.) ASSOCIATED GOLD REEFS.—The attorney to the vendor company has received cable from Auckland:—"The final clean up of 10 tons ore for 115 ounces. Transfer of property will be completed in a few days."

HERBERT.—The following cable has been received from the company's manager at Coolgardie:—"Main shaft is now down 60 feet. Have sunk a new shaft in the north and on the line of the reef. The ore is 5 feet thick. We have now in stock 70 tons of first-class ore showing gold freely."

ISLE OF MAN MINING COMPANY.—The secretary has sold 100 tons of this company's ore at £9 11s. 6d. per ton.

LAKE VIEW AND BOULDER JUNCTION.—A telegram has been received from Messrs. Parker and Parker, solicitors, Perth, advising that the leases have been transferred to the company.

LONE HAND, (25 Mile).—The following cable has just been received from the manager:—"Sunbeam, crosscut has just intersected vein. Ore broken, but good. Commenced to drive on north. Lone Hand, everything is ready to commence stoping. True Blue, levelling for four weeks, but have located again, still richer. Now beyond the influence of the fault. East shaft continues to look exceedingly well. Have located 3 ounce quartz reef 50 feet on the east of east shaft. Making good progress with dam. We have but to commence crushing ore to pay dividends."

LADY MARGARET.—The following report has been received by cable from Mr. Eversley Thomas, at Coolgardie:—"Lady Margaret Gold Mining Company (Limited) report lease 3125, 18 acres; shafts (?) four parallel; the strike is nearly east and west north vein; two shafts 49 feet and 65 feet; the average width of the vein is 1 foot 6 inches; the average value of sample is 3 ounces per ton. South vein, two shafts 25 feet and 18 feet; the average width of the vein is 3 feet 3 inches; the average value of samples is 1 ounce per ton. Lease 3126, 18 acres; the shaft is inclined on the vein, and has reached a depth of 60 feet; the average of the vein is 13 feet; the strike is nearly east and west; the average value of samples is 1 ounce per ton. There is every indication to show that the mine is one of value; much dead work will be necessary before the mine can be economically worked."

MENZIES CRUSOE.—Cable information has been received to the following effect:—"582 ounces of retorted gold obtained from 130 tons crushed has given 575 ounces of smelted gold."

MENZIES GOLD REEFS PROPRIETARY.—Cable information has been received to the following effect:—"390 ounces retorted gold obtained from 150 tons crushed has given 376 ounces of smelted gold.—Friday claim water shaft. Winze from 170 feet level south, reef averages 2 feet, average assay of ore 2 ounces 17 dwts. per ton."

MENZIES PIONEERS.—Mine manager advises the arrival of the machinery sent out, and is arranging for its immediate transport to the mine.

MILLS' DAY DAWN UNITED.—Cablegram from the head office in Charters Towers:—"Have crushed during the month 1046 tons of quartz for 642 ounces of gold. The approximate value of this return is £2225."

MYSORE WEST AND MYSORE WYNAAD.—Tank Block. The manager cables April crushings of gold as follows:—"After a mill run of 588 hours, 1400 tons, 703 ounces."

MURCHISON UNITED.—The mines superintendent announces by cable that the crosscut from the Lily vertical shaft at 190 feet from surface has intersected the vein passed through at water level 112 feet from surface. The vein is 8 inches wide, between well-defined walls, and assays 15 dwts. gold per ton. A crushing of 25 tons of ore from the winze and stope at the 100 feet level has yielded 97 ounces gold, being nearly 4 ounces of gold per ton.

MYALLS UNITED.—Translation of cable received from Mr. N. M. Cohen, local director, dated Sydney, April 27: The result of the trial is very satisfactory. After a run of 14 days, running 10 stamps, have cleaned up after crushing 105 tons of quartz, gross yield 104 ounces from the 250 feet level. The width of reef is 10 feet. Under the existing circumstances greatly exceeded our expectations. The plant is old-fashioned, and almost worn out, has been the cause of much trouble; not suitable for the work; too much is lost in the tailings. We are now running the mill on 20 stamps. Clean up May 11, and cable result."

NERBUDDA COAL.—The sales of coal for the month of March are 1484 tons.

NEW QUEEN.—The London office of this company has received the following cablegram, dated Charters Towers, April 25, giving result of crushing for past fortnight:—"210 tons yielding 195 ounces gold. Grinding is not yet completed. No. 5 formation, 94 tons, yielding 23 ounces. The workings show considerable improvement. No. 5 formation yesterday 2 feet. Gold bearing quartz. Have drawn upon you for £900. Have shipped per *India* 261 ounces gold."

NEW QUEEN.—The London office has received the following cablegram, dated Charters Towers, April 30:—"No. 5 formation (1270 feet) vein is fully 2 feet wide. Generally all is going well."

PESTARENA UNITED.—Gold return for April: 416 tons of ore produced 823 ounces of gold, equal to 1 ounce 19 dwts. 13½ grains per ton.

QUEEN CROSS REEF.—The London agents have received a cablegram, dated Charters Towers, April 27:—"Have crushed 250 tons for 679 ounces of gold. This is only a partial clean up."

ROSE HILL UNITED.—Cable report for week ending April 25:—"Lease 226. Main shaft is down 28 feet.—Lease 509. Shaft is down 28 feet.—Lease 1599 driven 5 feet. Quartz full of visible free gold. The width of reef is 4 feet 6 inches, in well defined walls.—Lease 516. Prospecting shaft is down 37 feet. Running crosscut to connect with reef on adjacent properties.—Lease 603. Main shaft is down 23 feet. Good gold-bearing leaders passed through should strike the main vein 60 feet."

SALISBURY-MURCHISON.—Cablegram from the manager states:—"Salisbury mill tests show 25 dwts.—Agamemnon: Assay lode in bottom of shaft, 2 ounces."

ST. JOHN DEL REY.—The following telegram has been received from Mr. Chalmers:—"Produce 10 days, second division April, 11,250 cits., equal to 1297 ounces troy; value £4360. Yield per ton 5·6 cits. (·64 ounces troy)."

TAMWORTH GOLD MINING COMPANY.—Telegraphic advice has been received from Tamworth that the machinery has been started, everything working well.

VICTORIA ASSOCIATION.—The following cablegram has been received at the London office:—"260 tons crushed, yielded 468 ounces gold."

VICTORIA REEF.—A cablegram has been received from the company's agents at Melbourne, stating that the property has been legally transferred to the company.

VICTORIA AND QUEEN.—Cablegram, dated Charters Towers April 29, states:—"Partial clean up of 255 tons for 740 ounces. Approximate value £2550, making total for the month 515 tons for 1427 ounces of gold; total approximate value £6220; crushing still going on."

WASSAU (Gold Coast).—A circular states that during the month of February last the 10 stamp battery worked 10 days 12 hours, and crushed 227 tons of ore, producing 312½ ounces standard gold, and giving a yield of 1 ounce 7½ dwts. per ton. This realised £1217 14s. 1d. Cablegrams have since been received advising the remittance for last month as 288 ounces bullion, and a yield of 1 ounce 1 dwt. per ton.

MINING IN CORNWALL AND DEVON:

NOTES ON MINING IN THE WEST.

(FROM OUR SPECIAL CORRESPONDENT.)

SHAREHOLDERS in Dolcoath have every reason to be satisfied with the record of the last three months' operations, as set forth in the circular just issued. No less than 147 fathoms of ground have been opened up by driving, sinking, &c., and 14,389 tons of ore, producing 507 tons of black tin, have been mined. This, under present circumstances, is a splendid output, and shows that the mine is as rich as ever in the bottom levels, on which its permanency depends. Many important developing operations, which will all tend to increase the mine's productive capacity, are in progress, and are being pushed on with the vigour which is more than ever characteristic of the management. The sinking of the Stray Park shaft, which has long been regarded as a very important and necessary work, will shortly be proceeded with, and 20 new heads of stamps will be ready for work in another three weeks or a month. The benefits of some of the modern improvements which have been introduced are already manifest; the new sorting floors, stone-breaker, the tram road, and the eastern shaft are effecting a saving of about one-half in the cost of conveying ore to the stamps. A further saving will arise from the erection of another set of new frames on the dressing floors, which will be at work about the middle of June. A proof of the determination of the executive to make the very most of the mine's resources is the announcement that the old workings are being searched for arsenic, the price of which mineral is now high. Some fairly productive ground has been found, but nothing is said as to the probable returns from this source. It will be remembered that at the ordinary general meeting it was stated that an interim dividend would probably be paid in the spring, but in view of the very low price of tin, and the fact that the full benefit of the works undertaken with the object of increasing the efficiency and economy of the company's operation has not yet been realised, the directors do not feel justified in making a distribution at present. It is evident that under the new management the cautious policy which has always been identified with the name of Captain Josiah Thomas is to be adhered to, and that there will be no danger of Dolcoath being numbered among those concerns which go up like rockets and come down like sticks. No doubt there will be a certain amount of disappointment among the shareholders at having to forego the half-promised dividend, but if they are amenable to reason they will recognise that the course adopted by the directors is the only proper one open to them in the permanent interests of the property.

CARN BERA agents report an important change in the general character of the lode and its surroundings in the 334 end west; the underlie is much less, not more than from 12 to 18 inches south with a good footwall. The lode has been cut in from 5 to 6 feet, but the south wall has not yet been encountered. It is producing fine stones of tin, and the agents hope to be able to give it a good value soon. At Tincroft, they have had a bad run in the engine shaft, which has considerably delayed operations, but by the end of this week it will be cleared.

AN adjourned meeting of Killifreth shareholders will be held on the 14th inst., when the committee appointed to consider the question of conversion will recommend the reconstruction of the concern as a Limited Liability company, with a nominal capital of £36,000 in 36,000 shares of £1 each, and the issue to the present shareholders in respect of each share held by them two fully-paid shares of £1 and four £1 shares credited with 10s. paid up thereon. The holder of one share in the present Cost-book company would, under this scheme, be entitled to six shares in the new Limited company of £1 each, on which there would be a liability of only 10s. per share on four shares, or £2 in all. It is proposed that the 10s. per share shall be called up at long intervals, 6d. on application, 6d. on allotment, and 1s. at intervals of not less than six months. Assuming that all the shares are taken up, the amount of capital provided by this scheme would be £12,000, which the committee consider ample for present purposes, the manager advising them that such an expenditure will enable him to reduce the cost of production very considerably, and also to largely increase the output. The scheme has a fair appearance enough on paper, but some of the large shareholders, including one member of the committee, are reported to strongly disapprove of it. There is likely to be considerable discussion at the meeting, but it is believed that the committee's proposals will be carried without very material change.

1896 MINING DIVIDENDS AND RIGHTS.—To Messrs. F. C. Mathieson and Sons, of 16, Copthall Avenue, E.C., the financial world is greatly indebted for the valuable statistics of share and company operations which the firm is continually publishing. They now publish, at a price of 5s., the mining dividends and rights for 1895, which is a valuable work, and likely to attract wide attention and favour. The following particulars are given—that is, as far as it is possible:—Date of announcement; name of share; amount of dividend per share; when x.d.; period for which dividend is payable, and number of dividend or coupon; when payable; date of posting of warrants in London; books closed; where payable if not in London

BIG VALLEY CREEK GOLD MINES (LIMITED).

THIS company has been formed to acquire and work four gold mining leases, comprising an area of 640 acres, in the district of Cariboo, British Columbia. The property is within 12 miles of the famous William's Creek, which has yielded gold of the value of £4,000,000 sterling. The property has been reported on by three well-known mining experts, who speak in a most decided manner of its great value.

Mr. P. C. Dunlevy, Soda Creek, Cariboo, British Columbia, an expert of 40 years' experience in placer mining, states: "I state without qualification that I have never before found so flattering a prospect, or heard of one as good being found by others, as this found on Big Valley Creek, William's Creek, where there was over $22,000,000 (£4,400,000) taken out of 2½ miles of the stream, had no such prospect to start with."

Mr. John Patterson says: "With regard to Big Valley Creek, I believe there is more gold in the above-mentioned creek than ever William's Creek produced."

Mr. George Isaac says: "I have every reason to believe it will be the richest hydraulic claim on the Pacific Coast, or perhaps in the world. I base my opinion on the prospects, the quantity of ground, and the water privilege, which is the best to be found."

It will be seen from these reports that the property has attracted considerable attention in the locality, having been reported on in terms that are not only satisfactory, but highly laudatory, by men of experience in mining and of knowledge of the particular district in which these mines are situated. The productive character of the neighbourhood in which the mines are located is abundantly attested by the output figures quoted above, which certainly run into a total that may be regarded with genuine satisfaction, and even surprise. British Columbia, as from time to time we have noted in our columns, is certainly coming rapidly to the fore as a gold-producing country, and not the least favourably situated among the properties in the province are the Big Valley Creek Gold Mines.

The board is composed of gentlemen of high standing, fully alive to the responsibilities attaching to statements in prospectuses, and who have satisfied themselves as to the *bonâ-fides* of the experts who have made the reports.

The capital of the company is £125,000, the purchase price being £100,000, only £6000 of which is payable in cash, leaving the ample margin of £25,000 as available for issue for working capital.

The prospectus of the above company will be issued on Monday next, May 4. The list will open on that date, and close on or before Wednesday May 6, 1896.

Prospectuses, with full reports and forms of application for shares, may be obtained from the secretary of the company, Mr. J. Foster, at 6, Great St. Helens, London, E.C.

We are informed that the company has sufficient capital guaranteed, and allotment will take place on the closing of the lists.

NOTES ON GOLD MILLING IN CALIFORNIA.

By ED. B. PRESTON, M.E.

Bulletin No. 6, issued by the California State Mining Bureau.

(*Continued from page 495.*)

No. 4. *Calaveras County.*—The rock consists of massive quartz, schistose, and slaty diabase, and chloritic and talcose schist, with iron sulphurets; it is crushed in jaw breakers at the head of the shaft, after passing over grizzlies, and is dropped into bins, from which the ore is conveyed in cars to three other bins in the mill, one for each section of 20 stamps, having a capacity of 600 tons each. The bins discharge into Challenge self feeders. The 60 stamps weigh 775 lbs. each and drop 105 times per minute, the drop being 6 inches, and the discharge 10 inches from the new die. Only one chock block is used, causing the height of discharge to constantly increase. The duty of the stamps is 4 tons in 24 hours. Round punched tin screens, 10 inches by 14 inches, are used. They are lightly burned before using. Three and a-half of the screen sheets are tacked on the screen frame on three sides; the top side is secured by a long, narrow strip of wood screwed to the frame. The superficial area of the discharge is about 287 square inch. The screen frame is braced by six cross ribs, to which the screens are tacked. A splash board is suspended in front of the screen by eyebolts and hooks, with a strip of canvas tacked along the bottom the full width of the screen. An iron apron or table is secured to the front of the mortar below the screen, the bottom of which falls 1 inch below the lip of the mortar, permitting the insertion of a rough inch board, 9 inches in width, in front of the mortar, flush with the upper edge of the lip of the mortar; on this the pulp falls from the screens, and it is claimed to be superior to a plate in retaining the amalgam; 3 inches below the board runs a trough, in which are two apertures one-third the distance from each end, which allows the pulp to fall on a short 6 inches wide copper plate, with a pitch toward the mortar, and from thence to the apron plate, 2 feet wide and 24 feet long, set to a grade of 2 inches to the foot. An inside front plate is used in the mortar. From the apron plate the pulp passes to a sluice box, and is conducted to the spreaders of the vanners, of which there are 24. After leaving these, the pulp is led through a sluice box and flume 1 mile long to the canvas plant. The plates are dressed every morning; a battery is hung up, the water shut off, the splash board removed and washed off, as also the screen and the entire front of the battery, to remove all sand; the plate is then vigorously scoured with a whisk broom to loosen the amalgam. A very dilute solution of cyanide of potassium is sometimes used during this operation, and the loosened amalgam brushed to the foot of the plate. The plate is then scraped upward with a piece of rubber 4 inches by 4 inches and ¼ inch thick; a piece of rubber belting would answer the same purpose. The collected amalgam at the head of the plate is removed in a scoop and placed in a safe. The plate is then sprinkled lightly with quicksilver, which is spread evenly over the entire plate, the water turned on, and the stamps dropped. The operation for all the plates requires nearly three hours.

A clean up of the mill is made monthly or semi-monthly, according to the condition of the battery amalgam, at which time all necessary repairs are made, and new shoes and dies are fixed if required. Shortly before hanging up the feed is shut off to permit the ore to be crushed down as low as possible. The water is then shut off from the battery, splash board and screen removed, and all hosed off; the inside plate is removed, and the amalgam scraped off. The contents of the battery are now removed, and placed in the revolving clean up barrel, the dies replaced, tappets set, screens replaced, and the mill started. The pulp that leaves the mill carries considerable auriferous pyritical slimes, as might be inferred from the high discharge used in the battery. This is conveyed through a sluice 12 inches by 8 inches, to a canvas plant 1 mile distant. Just before entering the building set apart for the recovery of these slimes, the sluice is widened to 18 inches, and divided into three sections by two narrow strips fastened to the bottom. These divisions fork off into separate sluices, which are again subdivided. Three of these subdivisions are carried directly through the building, and there divided, and the other three are divided off in five separate sluices, one for each section of the canvas table. There are 45 sections for each table—90 in all. They are 42 feet long, 22 inches wide, and set on a grade 1½ inch to the foot. No. 8 duck canvas is used, and when worn on one side it is turned; it lasts about one year. The last division of the pulp, outside the building, is into five boxes, 4 inches square, each of which terminates in a receiving box, reaching across three canvas sections, about 5½ feet. The five divisions supply one-third of the sluices on one side of the building, the pulp passing to the canvas through an auger hole in the side of the box. The flow is regulated by a slide suspended over the whole. Above the pulp distributing box is a clear-water box, and at the lower end of the canvas tables are two sluices, side by side—one to receive the concentrates, the other for the reception and discharge of pulp. The current must be thinned and distributed so that no accumulations form.

No. 5. *El Dorado County.*—The quartz carries considerable slate mixed with it, and about 3 per cent. of iron sulphurets. The stamps weigh 950 lbs. each, and drop 4 inches 104 times per minute, discharging through a No. 2 sheet tin perforated screen with from 5 inches to 7 inches discharge, crushing 3 tons per stamp in 24 hours. The shoes and dies are both steel. The battery is supplied with an inside plate in front. The apron plates are 16 feet long, set on a grade of 1½ inch to the foot, and are followed by 6 feet of sluice plates, 2 feet wide, on the same grade. These plates are dressed every day, but only scraped once a month. (Note:—This is not advantageous, as the constant scouring action of the pulp undoubtedly detaches fine particles of amalgam.) The batteries yield 62 per cent. of the amalgam. Eight Woodbury concentrators receive the pulp The quicksilver is introduced into the battery every half hour; the loss of quicksilver being estimated about 1 lb. to every 10 tons of ore.

No. 6. *El Dorado County.*—The quartz carries about 2 per cent. of sulphurets and contains slate mixed with it. The stamps weigh 750 lbs, each and are fed by Challenge feeders; no rock-breaker is used. The stamps make 96 drops per minute, varying from 4½ inches to 6 inches, with 7 inches discharge. The mortars are wide, and have an 8 inch wide inside amalgamated plate; the screen is perforated tin, equal to No. 7. The apron is 54 inches by 42 inches, with a grade of 1½ inches to the foot, followed by sluice plates 12 feet long, which are double on one battery and divided into four divisions on the other; this latter arrangement gives better results. Below the sluice plates is a blanket sluice, 6 inches long and 14 inches wide, the blanket being washed twice a shift. From these the pulp passes to the Frue vanners with 6 feet belts; the same wheel runs both stamps and vanners. The plates are dressed twice in 24 hours, but are not scraped until the clean up, once a month. One and three-quarters tons are crushed to the stamp per 24 hours.

No. 7. *Mariposa County.*—This mill is working on ores containing gold in a very finely divided state. There are 10 stamps of 900 lbs. each, fed by self feeders. These stamps drop 96 times per minute, with a 7 inch discharge when the die is new; when it is worn down one half, a smaller chock block is placed under the screen. The pulp is retained in the mortar for a long time. The stamps are only raised to the level of the water as it stands in the mortar, and a front inside plate is used. The screen is a 60 mesh. It is claimed that 70 per cent. of all the amalgam saved is taken from the inside battery plate. There are three apron plates to each battery; the first is immediately in front of the splash board, next to the lip of the mortar, 12 inches deep and the width of the mortar. This is followed by a 2 inch drop on to a second plate 3 feet deep, across the width of the mortar, succeeded by a 1 inch drop to a 4 feet apron plate. From this plate the pulp passes immediately through distributing pipes to the vanners, of which there are three. Two of these are 4 feet wide, taking the pulp from one battery, while a 6 feet belt vanner takes the pulp from the other battery. The narrow belt vanner gives the best satisfaction.

No. 8. *Nevada County.*—The ore is delivered by car at the top of the mill into grizzlies, the bars of which are 2½ inches apart, and which deliver the coarse stuff to a crusher of the Blake type, through a bin with chute immediately over the crusher, keeping the same constantly supplied without the aid of a shovel. From the rock breaker the ore is delivered into bins with chutes connecting with the Challenge self-feeders. The feed is operated from the centre stamp. The stamps drop 7 inches and 86 times per minute, with a 4 inch discharge. Steel shoes on iron dies are used. The screens are English sheet tin, perforated No. 10, five pieces making a complete screen, costing 50 cents, and lasting one month. The steel shoes on iron dies have records of over 300 tons to the stamp, the daily average being from 1½ to 2 tons per stamp. The plates are divided into an upper apron 18 inches wide, followed by a 4 feet apron. Between the two, catching the pulp from No. 1, is a box 3 inches wide, with a perforated screen bottom, somewhat coarser than the battery screen. This acts as a distributor on No. 2 apron, retaining any coarse pieces. For the 40 stamps and accompanying concentrators 15 miner's inches of water are used, all applied on the inside of the battery. The aprons have a ½ inch grade to the foot. Below the apron are 12 feet of sluice plates, part of them 30 inches wide, while the others have the same width as the apron above. These plates are cleaned up every morning with pieces of rubber belting; it takes about 15 minutes to clean one set. From the sluice plates the pulp passes over a 12 feet shaking table covered with silver plates; these plates receive their motion from an eccentric placed underneath. Passing the table, the pulp enters a box, from which it is conveyed through pipes to the vanners on a lower floor, two for each battery.

No. 9. *Nevada County.*—The stamps weigh 760 lbs. each, drop 6 inches, 95 times per minute, with from 4 inches to 6 inches discharge, and crush from 1½ to 2 tons per day, using steel shoes and dies. There is a 5 inch wide silvered plate in the front of the battery. A No. 9 perforated sheet-tin screen is used; it is not burnt before putting on, and is turned when the lower edge is worn, lasting on an average 30 days. In front of the screen is a splash board, provided with an 8 inch plate next to the screen. The upper apron plate is 18 inches deep, set on a grade of ½ inch to the foot, with 12 feet of apron plates below, divided into four plates of 3 feet each, set on a grade on 1 inch to the foot. From these the pulp drops

into a box running across the end of the plate, from whence it passes to the vanner. The plates are scraped every 24 hours, with the exception of the upper 4 inches next the mortar, and are dressed twice a day, using dilute cyanide of potassium. Both rubbers and chisels are used in scraping the plates. In cleaning up the batteries, which occurs once per month, the headings are put into a revolving barrel with pieces of iron and quicksilver, and after running several hours, the contents are removed in buckets, the sand "boiled out" with the hose, the dross skimmed off, and the quicksilver strained. About 75 per cent. of the amalgam is saved in the battery. The tailings assay from 25 cents to $1·50 per ton.

No. 10. *Nevada County.*—The stamps weigh 800 lbs. each, and are given a 6 inch drop, 100 times per minute, with a discharge varying from 2 inches to 4 inches; there are no plates in the battery. The ore passes over grizzlies, with bars 1¼ inches apart, to a No. 2 Blake crusher; thence to the ore bin that supplies the Challenge feeders, which are operated from the centre stamp. Steel shoes and iron dies are used—the shoes lasting, on an average, 155 days; the iron dies, 70 days. No. 6 Russian iron slot screens are used. The outside mortar plate is 14 inches wide, with ½ inch pitch to the foot, and retains 75 per cent. of the plate amalgam. The apron below is 4 feet by 4 feet, with a grade of ½ inch to the foot. Beyond this are 12 feet of double sluice plates 12 inches wide, and with ½ inch grade to the foot. Three sand boxes separate the different apron plates. From the sluice plates the pulp passes directly to the concentrators. The duty of the battery is 2 tons per day. The tailings assay $1·80 to $2 per ton. From 10 to 12 lbs of quicksilver per month is used for the 40 stamps. The plates are scraped every day, and the batteries cleaned once a month, the headings being worked in a Knox pan. A weak solution of cyanide of potassium is used in dressing the plates.

No. 11. *Placer County.*—The quartz carries but a small percentage of sulphurets, and is delivered from the mine over an incline tramway to two grizzlies with 12 bars 3 inches apart, 12 feet long, 3 inches deep, and ½ inch wide, set on an angle of 45°. In front, below, and between the grizzlies is a Blake crusher, from which the ore drops into the bin that supplies the Challenge feeders. These are operated from the centre stamp. The stamps weigh 750 lbs. each, and drop 5 inches 90 times a minute, and the discharge averages 5 inches. The screen is set on a 4 inch block, with a 5 inch plate on the inside. The screen is a No. 10 slot-punched, set with a slight incline. Part of the water for the battery is supplied from a small wooden trough, pierced with holes in front of the screen. The outside iron lip of the mortar is covered with a silvered plate. The apron, set on a grade of 1½ inch to the foot, is 4 feet long, and is followed by 12 feet of sluice plates, 18 inches wide. After passing through a quicksilver trap, the pulp passes through a 3 inch pipe to the Frue vanners. A tank of quicksilver is used every three months, in crushing 3500 tons of ore. The plates are rubbed every day with rubbers, and are occasionally dressed with phosphate of lime, or with lye. The battery is cleaned up once a week, and yields 50 per cent. of the amalgam.

(To be continued).

TRANSMISSION OF POWER BY COMPRESSED AIR AT THE NORTH STAR MINE, CALIFORNIA.*

By P. R. ROBERT.

THE North Star Mine is one of the oldest mines in the State of California, having been worked for the past 40 years. The workings have attained a depth of over 2400 feet on the dip of the lode. The mine is situated about 2 miles south from the town of Grass Valley, at an elevation of 2470 feet above sea level. The whole of the machinery is operated by power derived from eight Pelton wheels working under various heads, mostly between 230 feet and 270 feet. The company owning the mine lately acquired another group of mines 1 mile distant from the North Star, and situated on a hill about 300 feet above Wolf Creek. These mines had been idle for over 40 years, but when worked had yielded over £1,000,000 in gold. The old workings were extensive, and known to be quite wet.

A question arose as to the advisability of operating the new works by means of hydraulic power either at the works, involving a loss of head of 130 feet, or to transmit the power from the creek bed, the lowest attainable level; the motor in any case to be a Pelton, or similar wheel. The merits of transmission by electricity were also considered. It would have been quite possible to transmit the power from the water wheel the required distance of 813 feet by means of ropes, but as it was necessary to use compressed air for power drills in the mine, the owners of the property finally decided to transmit the power by means of compressed air at a pressure above the atmosphere of 90 lbs. per square inch. It then became necessary, in pursuance of the plan adopted, to put down a pipe line 7077 feet in length and 20 inches in diameter, to connect with another pipe line already in existence, 22 inches in diameter, and having a length of 13,200 feet, with a head of water at its lower end of 440 feet. It was decided to construct the new pipe line of soft steel, the entire line of 7077 feet to be rivetted together.

The pipe line is buried 2 feet below the surface of the ground. A stone bridge was built across Wolf Creek, and the pipe embedded in concrete, the object being to prevent any movement of the lower end of the pipe.

The actual head attained is 775 feet, the effective head being very much less, approximately 716 feet, accounted for as follows:—

The length of the upper line is.....	13,200 feet	
At the lower end of that line, under a head of 440 feet, there are taken out per minute 275 miner's inches of water (at 1·45 cubic feet per inch).....	= 398·75	c. ft.
Added to this the amount used in the new line is.....	253·75	„
Making the total amount of water passing through the upper pipe line per minute =	652·50	„

equivalent to a velocity in the pipe of 4·1 feet per second.

In the lower pipe of 7077 feet the rate of flow would be 1·8 feet per second.

Theoretically, the deduction to be made from the 775 feet of head would be as follows:—

Total head available	=	775·00 ft.
Deduct for friction on 13,200 feet pipe 22 inch diameter, 0·390 feet per 100 feet	=	51·48 „
Effective head at [upper end of new line	=	723·52 „
Deduct for friction on 7077 feet pipe 20 inch diameter, 0·100 feet per 100 feet	=	7·07 „
Leaving an effective head of		716·45

As a matter of fact, the gauge pressure approximates closely to 310 lbs. per square inch, which is equivalent to 716·76 feet head. With a water pressure of 310 lbs. per square inch, 1 square inch of nozzle area will discharge, theoretically, at the rate of 12,736·20 feet per minute, equal to 88·44 cubic feet of water, or (at 1·45 cubic feet per miner's inch), equal 61 miner's inch, equal to 119·92 horse power. The actual discharge would probably be 5 per cent. less than this, or (say) 84·02 cubic feet per square inch of nozzle area, equal to 113·96 horse power, with which the wheel should develop 85 per cent., or 96·86 horse power per square inch of nozzle area. It is expected that 280 horse power will be required at the wheel, and this would correspond to a nozzle area of 2·89 square inches, equivalent to 178·15 miner's inches (of 1·45 cubic feet each).

At the lower end of the upper pipe, 13,200 feet from the reservoir, where 398·75 cubic feet of water per minute are withdrawn, the gates are frequently closed and opened again, making a variation in the amount withdrawn of from 100 to 125 miner's inches per minute. This we find affects the pressure, causing it to vary at times from 310 to 365 lbs. per square inch (gauge pressure). The movements of the shocks, caused by suddenly opening and closing the gates, are noticeable as oscillations of the gauge needles, indicating 40 to 60 lbs. per square inch at first, gradually diminishing in intensity until normal pressure is reached. It is estimated that the pipe line has sufficient capacity to supply power for three such plants as that at present installed, and hereinafter described, developing (say) 750 horse power if needed.

That there is nothing new about the use of compressed air for the transmission of power goes without saying. The subject has received the attention of such eminent scientists as Professor Unwin of England, and Professor Reidler, of Berlin, and it is recorded by the former that an efficiency of 40 to 50 per cent. may be secured when using the air cold, whereas heated an efficiency of from 59 to 73 per cent. may be obtained. The experiments of Professor Reidler showed that the fuel used in heating compressed air to a temperature of 300° F. was five times as effective as when used for making steam. Bearing such facts in mind, it was decided to use the most economical and best attainable means for reheating. The apparatus used for cooling the air in the inter-coolers has frequently, in two stage compressors, been inadequate, owing to want of sufficient size, and this point has received careful consideration in designing the plant.

On the west side of Wolf Creek a stone power house has been built to contain the water wheel and compressor. The Pelton water wheel is 18·66 feet in diameter, measuring from outside to outside of buckets, and is placed directly upon the crank shaft working the compressor. The design of the wheel is entirely new, and is the largest wheel yet constructed upon the Pelton system. The reason for the large diameter is that the number of revolutions was limited to 110 per minute, and was necessary, to secure the highest efficiency, that the periphery of the wheel should have one-half the velocity of the water at the nozzle, according to well-known rules. It is here proper to remark that all the water used for power, &c., has to be paid for at a fixed rate (*i.e.*, 14 cents), 7d. per day per miner's inch. A miner's inch in this case is assumed by the water company to signify 1·45 cubic feet of water per minute. Therefore, to secure the best result from a given amount of water is of the greatest importance. The extreme diameter of the wheel outside to outside of bucket is, as stated, 18·66 feet. The width of the face of the wheel is 8 inches. The hub of the wheel is 29 inches in length. The length of the bore of the hub is 20 inches. The hub is of cast iron, with 32 steel spokes. Eight of these, known as tension rods, are 2 inches in diameter, and 24, known as radial spokes, are 1¼ inches in diameter.

The larger spokes, or tension rods, are so arranged as to form two trusses at a right angle with each other. These spokes might be properly termed truss rods.

The radial spokes are transversely apart at the hub, measuring, centre to centre, 24 inches. The truss rods are transversely apart at the hub, measuring, from centre to centre, 30 inches. The weight of the wheel is 11,772 lbs., distributed as follows:—

Weight of the rim	6,800	lbs.
„ „ hub	2,800	„
„ „ spokes	1,500	„
„ „ buckets	672	„
Total	11,772	lbs.

The buckets were 96 in number as the wheel was built originally, and are made of phosphor-bronze, and measure 8 inches by 4 inches by 2¼ inches deep. It was found necessary to discard one-half of the number of buckets, so that now the wheel has 48 altogether, reducing the weight to 11,436 lbs. The rim of the wheel is composed of six pieces of 4 × 4 × ½ angle iron, bolted together. The wheel works much more satisfactorily with the reduced number of buckets, permitting of the discharge of water more freely on leaving the wheel. Special attention has been given to securing such a form of nozzle as can be regulated, so that the full force of the water may be utilised with a light load. A number of experiments were made to determine this point, and a rectangular form was at first adopted; to this was affixed a movable inclined dip, rising from the bottom, connected with a suitable governing apparatus. Thus the area of the nozzle opening will vary with the working load on the wheel. The cost of building a wheel of this kind is stated by Mr. E. S. Cobb, the designer, as being fully 20 per cent. less than the cost of a disc wheel of the same dimensions.

The compressor is a compound duplex tandem erected upon a rubble-stone foundation capped with blocks of cut granite. The crank shaft of the compressor carrying the water wheel is 10 inches in diameter. The diameter of the low pressure cylinders is 18 inches. The diameter of the high pressure cylinders is 10 inches. The air in the low pressure cylinders is compressed to approximately 25 lbs. pressure per square inch, and then passes through the inter-cooler placed directly under the water wheel in the wheel pit. The cylinders are so connected that any cylinder can be disconnected, and all the others can be continued in operation. The inter-cooler is composed of 49 copper tubes 1 inch in diameter and 18 feet long, and each end of the tubes is secured by means of a stuffing box and gland. The tubes are arranged in seven rows, seven tubes to a row. The flues have a cooling surface of 230 square feet. All the waste water from the wheel is available for cooling purposes, as it falls directly upon the inter-cooler. So far as tested, the air is found to be cooled to about the temperature of the outside air, and is delivered cool to the high pressure cylinders. The compressor weighs approximately 58,000 lbs. The air compressed in the high pressure cylinders to 90 lbs. pressure per square inch passes through a pipe 6 inches in diameter to a receiver of 150 cubic feet capacity, placed in the engine house at the top of the hill (a distance of 813 feet). From thence, before passing to the engines, the air passes through a re-heater of special design. The heater is composed of two cast iron heads, each of which supports 36 tubes 2 inches in diameter by 6 feet 3 inches in length. The air is introduced to the heads, and passes through pipes 1 inch in diameter to the closed ends of the 2 inch tubes, returning outside in the space between the 1 inch tube and the interior surface of the 2 inch tubes. The heater has a total flue heating surface of 395·82 square feet, and weighs 14,547 lbs. This may be called a compound re-heater, as one half of it is used to heat the compressed air going to the high pressure cylinder of the pneumatic engine, and the other half is used to re-heat the same air after it has passed through the high pressure cylinder and before it passes into the low pressure cylinder of the hoisting engine.

The engine for hoisting is a cross compound with Corliss valves. The valves are made specially for working air, but will also do very well with steam. The high pressure cylinder has a diameter of 12½ inches, and the low pressure a diameter of 19 inches. The stroke of both is 36 inches. The engine is direct acting, the drums for the ropes being directly upon the crank shaft. The shaft from which the engine will hoist is a three-compartment one. One compartment is for the pump, 5 feet by 5 feet. The two remaining compartments, each 4 feet by 5 feet, are for hoisting. The weights of the ascending and descending cages will balance. The shaft is timbered with 10 by 10 inches square timber sets. The sets are 4 feet centre to centre. The dividing timbers are 8 by 10, and the studdles 8 by 8, making the dimensions of the shaft inside the sets 14 feet 4 inches by 5 feet. Outside dimensions 16 feet by 6 feet 8 inches, and outside of linings 16 feet by 7 feet. The pump is a compound Dow sinking pump, and is calculated to throw 500 gallons of water per minute from a depth of 300 feet at a speed of 25 double strokes.

The high pressure cylinder is 12 inches in diameter, and the low pressure cylinder a diameter of 20 inches, both cylinders a stroke of 30 inches. The pump is direct acting, and has differential plungers. The small plunger has a diameter of 10 inches, the large plunger of 14 inches. The suction pipe is 10 inches in diameter, and the discharge pipe 8 inches in diameter. The pump has been tested by steam, and has raised the amount of water named to a height largely in excess of that required. The stroke of the plungers is 30 inches. The pump is fitted with guides for convenience in raising and lowering. The weight of the pump is about 13,000 lbs. To raise or lower the pump a small winch operated by compressed air will be used. The compressed air for working the pump will go directly from the heater at a temperature of 300° to 350° F. As an accessory to the plant there are three tubular steam boilers 4 feet diameter by 16 feet long, having a heating surface of 1836 square feet. These boilers were already on hand, and had only to be put in good order to be available in case of emergency—*i.e.*, whenever the water supply gives out, as sometimes happens in the winter time, and when there is a break in the ditches supplying the pipe lines. In such a case the engines have simply to be operated by steam instead of air.

All the pipes designed for steam or heated compressed air will be properly covered with suitable non-conducting material. The boilers can be utilised for the storage of compressed air, giving, with receiver, main pipe, and drums, 850 cubic feet of storage capacity. The power house is constructed of stone and brick. The foundations are of stone rubble laid in cement, and capped with cut granite. The mortar used consisted of five parts of quartz sand to one of Portland cement. The power house and hoisting works are lighted by a 100 lese 16 candle power dynamo of the multipolar type. The dynamo is attached directly to the shaft of a Girard water wheel, 16½ inches in diameter, under the same head of water as the large Pelton wheel. This wheel is calculated to make 1400 revolutions per minute. The nozzle openimg is about 0·3 inches in diameter. The wheel will use from 3 to 5 miner's inches of water, depending upon the number of lights in use. The pipe line was finished with an air chamber and two relief valves, but neither of these valves is as sensitive as is desirable. Since writing the foregoing, a number of tests have been made. The theoretical velocity of discharge of water from a nozzle at 720 feet head is 12,912·6 feet per minute.

When running at full speed, 110 revolutions per minute, with a nozzle of rectangular shape, measuring 2 × 1·375 inches, or of 2·75 square inches area, the theoretical discharge would be 246·59 cubic feet per minute. The actual discharge was 240 cubic feet, or 97·327 per cent. of the theoretical.

The amount of water per minute at the head given is equivalent to 327·27 horse power (240 × 625 × 720 ÷ 33,000). The loss on the wheel was found to be 33·35 horse-power, equal to 11·90 per cent., making the efficiency of the wheel 88·10 per cent., and leaving the power as delivered to the compressor 293·92 horse-power. The friction of the compressor was found to be equivalent to 22·66 horse power. The power used in compression was determined by indicator cards. The areas of the compressor cylinders, as computed, deducting for areas of rods, were, for the low pressure cylinders, 252 square inches, and for the high pressure cylinders 77 square inches. The mean effective pressure in the low pressure cylinders was 22·4 lb. per square inch. The mean effective pressure in the high pressure cylinders was 58·8 lbs. per square inch.

252 × M.E.P. 22·4 × 440 = 2,483,712 feet lb.
77 × M.E.P. 58·8 × 440 = 1,992,144 „

Total ..... 4,475,856 „ ÷ 33,000
= 271·26 horse power as the power used in compression.

With the temperature of the air at 60° F., and the height of the barometer at 27·40 inches, the atmospheric pressure was 13·44 lbs. per square inch.

The volume of free air admitted to the cylinders was 1,482·04 cubic feet per minute.

The volume of free air cold (60°), as delivered from the compressor is as follows:—

$$V = \frac{1482 \times 13{\cdot}44}{90 + 13{\cdot}44} = 192{\cdot}54 \text{ cubic feet per minute at 90 lbs.}$$

The question then arose as to what was the value in power of the above number of cubic feet of air per minute delivered at a pressure of 90 lbs. per square inch. This value depends upon whether the air is used expansively in the motors, and upon the ratio of expansion, also upon the increased volume to be secured by heating. In this case the benefit is secured of using the air expansively by means of the compound engine, with Corliss valves for the hoisting, already mentioned, and by means of the compound pump used for sinking. By heating to 300° there was obtained an increase of volume of 46·2 per cent., and if to 350°, of 55·9 per cent.; both of these temperatures are practicable with the expenditure of a very small amount of fuel. Very much higher temperatures the author considers objectionable, by reason of difficulties in lubrication of pistons and piston rods. The final temperatures of the air in the low pressure and the high pressure cylinders of the compressor were 200° and 204° F. respectively. The clearance in the compressor cylinders is so trifling that it may be considered as *nil* (a little over 1-32nd of an inch).

(To be continued.)

* Paper read before the recent meeting of the Institution of Mining and Metallurgy.

A dividend of 1s. per share was declared, payable on May 20 to shareholders in the BROKEN HILL PROPRIETARY COMPANY (LIMITED), the books for which will be made up on the morning of the 6th of that month.

Letters of allotment have been posted in connection with the YALGOO PUBLIC BATTERY AND GOLD MINING COMPANY (LIMITED).

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The Mining and Industrial Journal of Mexico.
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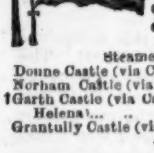

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COMPANIES AND LEGAL ANNOUNCEMENTS.

*** Advertisements are inserted in this column at the rate of 9d. per line, with a minimum charge of 7s. 6d.

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HOLDERS OF SHARE WARRANTS TO BEARER are informed that they will receive PAYMENT of the DIVIDEND declared at the General Meeting held on the 30th ult., at the rate of 12s. per share, free of Income Tax, on and after Saturday, the 9th May, 1896, on presentation of Coupon No. 35, either at the Company's Office in London, or at the Société Générale, Rue de Provence, 54, Paris, or at the Deutsche Nationalbank in Bremen.
Coupons for payment in London must be left four clear days previously for examination, and may be deposited at once.
By Order,
GEO. N. THOMSON, Secretary.
Offices of the Company:
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The Mining Journal,
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LONDON: MAY 2, 1896.

NEW KLEINFONTEIN.

THE New Kleinfontein is a company which has for a long time been a favourite amongst investors and speculators. On the face of it this may appear somewhat inexplicable, for its achievements have been neither exceptional nor brilliant. Considering the lowness of its yield and the small dividends it has paid, the shares, before the disturbances in South Africa took place, went up to a high figure, much exceeding their apparent value, though, at the present moment, the price is quite a reasonable one. The explanation is this. The property is valued more for its exceptional prospects than for its past or present achievements, for a comparatively long and prosperous life is awaiting it, though as yet it cannot for certainty be predicted what the profits and the dividends will be. Its career up to the present has neither been a long nor brilliant one. The original company, which was floated at the end of 1890, met with no success, for not only was the ore of a low-grade character, but the working costs were too high. Still they went on with the hope of meeting with better success, but failure always attended their efforts, and at last the mine was shut down and the battery let out to other companies. In February, 1893, however, an option was given to the Benoni Syndicate to float a new company, and in November of the same year they formed one, with a capital of £110,000, of which £30,000 was working capital. At that time the old shares were quoted at 5s. 6d., and the shareholders received one new share for every five held, with the option of subscribing for more. The new company set to work vigorously, and by May, 1894, they were able to start crushing with 35 stamps, which was increased to 50 and 65 some time afterwards. The property at that period consisted of 59 claims, of which 45 were reef bearing, and allowing for faults and dykes, the quantity of ore was estimated at 1,100,000 tons. It was calculated that with the then crushing power the mine had a life of 15 years, which, with the 100 stamp mill, which was to be erected, would be reduced to 10. In order, therefore, to prolong the life of the mine, the directors in March of last year effected an amalgamation with the dip ground possessed by the Benoni Syndicate, a stroke of policy which was the direct cause of bringing the company into such general favour. This increased the claims to 147, and the ore in sight to 3,150,000 tons, making the life 30 years. Not only did it thus add many years to the life of the mine, but it promised to improve its immediate prospects. Before the amalgamation it was calculated that the Main reef and Main reef leader would pass out of the company's area at a vertical depth of 750 feet, whereas it is now estimated that it will be necessary to go down to 2430 feet to get to the end of them. The prospects are further improved by the fact that about 200 feet south of the northern boundary of the Benoni claims, or 900 feet south of the Kleinfontein series, are three distinct outcrops, believed to be the same reefs as those worked by the Chimes Company. So much for the past career of the New Kleinfontein. Now that the stamps are to be increased to 140 head (with driving power sufficient to increase it to 160), what is its probable life and profits? Mr. POPE, the company's consulting engineer, comes to the conclusion that the mine is worth from 12 to 14 dwts. over a 3 foot stope, and is of opinion that in a year's time the mine will be quite competent to keep a mill of 150 heads fully supplied with ore. The erection of this mill and the necessary development would have to be provided for by an increase of capital. Assuming, therefore, the share capital of the company to be raised from £185,000 to £225,000 by the creation of 40,000 new shares, Mr. POPE estimates the company's prospects as follows:—"I estimate," he says, "the tonnage of ore contained in your ground (147 claims with an average dip of 35°), and available for stoping, at about 3,530,000 tons; of this amount about 100,000 tons have already been milled, thus leaving 3,430,000 tons of ore in your mine. Taking the value of this ore at 35s. per ton, which I consider you will recover, the ore contained in your mine to-day is worth £6,002,500. It will cost you to mine and mill, inclusive of cyaniding, about 22s. 6d. per ton; there is, therefore, in your mine a profit of approximately £2,143,750. With a 150 stamp mill you will probably crush about 216,000 tons of ore per annum, thereby bringing the life of your mine to about 16 years. The profit accruing from the working of 150 stamps would, therefore, represent an annual income of about £120,000, after deducting 10 per cent. per annum for depreciation, or rather more than a 50 per cent. dividend on a capital of £225,000. These calculations are based on a recovery of 10 dwts. per ton, taken at 70s. per ounce, which I consider well on the right side."

During the year the capital was increased from £110,000 to £185,000, for the purpose of acquiring the 92 Benoni claims, and provide the money for the subsequent equipment of the mine. Of the new shares, 60,000 were issued in exchange for the transfer of the claim, and 15,000 were allotted to the shareholders of the company *pro rata* to their holdings, at £4 each. With the funds thus raised, a total capital expenditure of £74,290 was incurred in 1895, in the erection of machinery and plant, permanent shafts, buildings, &c., the total valuation of the plant and permanent works now standing (after depreciation) at £119,190. In addition to the foregoing, the principal assets of the company—apart from the mining rights—consist of stores, machinery, and tailings in stock worth £11,477 cash, and accounts current £9806. Against this there are cash liabilities of about £15,633, so that practically the company has only a debt of a little over £5000 to meet. Coming to the figures of the year we find that there was a slight falling off of 1 dwt. in the average value of the ore per ton, but this is a feature which should not cause any discouragement, as it is the experience of most of the mines on these fields when passing between free milling and blue rock, or what is commonly known as the poor zone. What is encouraging is that the third level shows a decided improvement in value, which is borne out by the winzes in the second and third levels. In the mill 67,985 tons of ore were treated, and resulted in a recovery of 23,327 ounces of bullion, which realised £84,601, an average of 6·86 dwts., or 24s. 10½d. per ton. The mine and mill working costs absorbed £73,239, or 21s. 6½d. per ton, and the gross profit amounted to £11,362, or 3s. 4d. per ton milled. In the cyanide works 51,470 tons of tailings were treated, with a resulting recovery of 8426 ounces of bullion, which realised £25,065, an average of 3·3 dwts., or 9s. 11d. per ton. The cyanide working expenses amounted to £12,714, or 5s. 1·7d. per ton, leaving as gross profit the sum of £12,351, an average of 4s. 9½d. per ton. The total profit on the year's working is given in the profit and loss account as £23,900, equal to 8s. 1d. per ton of ore treated. Against this must be set the charge for depreciation, amounting to £12,983, leaving a net divisible profit from the mining operations of £10,917. This does not, however, represent the entire profits earned, since about 54,000 tons of reef were developed in excess of that milled, and the cost charged to current expenses. This extra development represents additional £10,000 of profit actually earned. A further profit of £45,000 was derived from the issue of 15,000 reserved shares at £4 each, and one dividend of 12½ per cent., absorbing £13,750 was distributed to shareholders.

It will thus be seen that the prospects of the company are most hopeful, and that at the present price the shares are an excellent investment. When the amalgamation was effected the shares went up to over £6; now they stand at nearly £4, and it is not at all unlikely that when the disturbing influence

in the South African market are removed, and a stronger tone sets in, that they will again reach that price. It is true that the past year was not a brilliant one. There was a falling off in the grade of the ore, and there was a lamentable scarcity of native labour. But these promise to be only temporary. The lower levels now being opened up are promising, and quite equal to anything yet opened in the mine. Then, again, a much larger proportion of Main reef has proved to be payable beyond development. The labour difficulty is the least hopeful, but even that may improve sooner than we anticipate. It would be absurd, however, to attempt any prediction on this head. It must be left for the future to decide, and the future is not at all a matter of certainty.

OUR SEMI-SOVEREIGN.

MERCY is the Prerogative of the Crown. The events of the past few days have enabled men to understand the full meaning of this prerogative. The royal assumption of OOM PAUL has led us to forget that he is not a royal personage. He has demanded too much consideration from us; we have drivelled, yet in shrieking yielded it, and in our hysterics we have forgotten that he is no more than a semi-Sovereign, that his State is our vassal, and that the Transvaal is part of the British Empire. We are apt to forget what has taken place. Fellow-subjects of our own have been charged on indictment, the first count of which alleged against them the crime of high treason. To this they pleaded guilty. By this plea they relieve the jurors from forming an opinion as to their guilt, and the judge from all responsibility in directing the jury as to the law affecting the evidence. It remained merely for the judge to apply the law of the land to the offence to which they had pleaded guilty. The judge had been brought from a neighbouring State, the Orange Free State. It can only be supposed that this was done that he might approach the application of the law unblinded by the heated feeling which has led to the regrettable events which terminated in the trial. The judge decided, and it cannot be doubted, honestly, that the first count was framed under the Roman Dutch law, the common law applicable to the Transvaal. The punishment for that offence is death, and having so concluded he was left no alternative but to pass that sentence. The same would happen in this country were any person to be indicted for murder and were to plead guilty thereto; the judge, whatever his sympathy, whatever his sentiment, whatever representation he might feel thereafter justified in making to the Crown, would be bound by law to pass upon the prisoner the sentence of death. He would have no alternative. That this was the position of the judge at the trial of the prisoners at Pretoria, in his own view, seems clear from the fact that he then and there held out to the prisoners the hope that mercy would be extended to them by the authority to whose hands the prerogative of mercy was entrusted.

And how was OOM PAUL then placed? We sympathise with him. He has tried his hardest to pose at the head of his State as possessing all but Sovereign powers. Is it wonderful if he felt keenly at that moment he was but semi-Sovereign? That he had within his State all the responsibility of the Sovereign? That without his State again he had that responsibility without the freedom; and, moreover, he felt that within and without his State he bore the responsibility he owed to his supreme Sovereign, to the Queen of the British Empire, from whom he in the name of his State accepted in 1881 the trust then imposed on him by the grant authorised by her Royal Sign Manual and Signet. Is it possible that OOM PAUL since the agitation in Johannesburg last December has not daily calculated his responsibility to her Gracious Majesty? Is it possible that he has failed to scan with ever-increasing vigilance the pregnant words of that grant, or that he has not been advised by the able lawyers of his own State, assisted by the able lawyers which we know adorn the Bench in the Orange Free State, that the acceptance of a grant pre-supposes the ownership of the grantor and his power to give. He must, therefore, have been fully conscious that in accepting the grant of 1881 the inhabitants of the Transvaal territory were admitting that the Transvaal was the possession of the Queen over which she possessed the Supreme Sovereignty. Let us turn to the opening words of the grant of 1881, signed at Pretoria on August 3, 1881, by Commissioners on behalf of Her Majesty. They run thus: We "do hereby undertake and guarantee that from and after August 8, 1881, complete self-Government, subject to the Suzerainty of Her Majesty, her heirs and successors, will be accorded to the Transvaal territory upon the following terms and conditions, and subject to the following reservations and limitations." Then follow the terms and conditions which are contained in articles (so-called) numbered from 1 to 33. For these articles, other articles numbered 1 to 20 were "substituted for the articles embodied in the Convention of the 3rd August, 1884," as we have all been made aware by the Convention of 1884. But the words of the grant itself of 1881 has never been altered, and the inhabitants of the Transvaal hold now as then by the terms of the grant subject to the Suzerainty of Her Majesty, her heirs, and successors. When OOM PAUL asked himself what it was his State held of Her Majesty, the answer came in the words of the grant "complete self-Government subject to the Suzerainty of Her Majesty." It is then he felt his semi-Sovereignty. Had he been Sovereign, had he felt himself "over all persons and in all causes within his dominions supreme," it is possible to imagine that his clemency might have exceeded the bounds which fears of responsibility to a supreme Sovereign have forced upon him, and that he would have inflicted a penalty less severe than five years when commuting the death sentence. He has already, in 1884, by obtaining better conditions to be attached to the grant, acknowledged that the supreme Sovereign may impose new conditions to the grant. He may be aware that on another occasion the imposition may have less appearance of an agreement between one supreme Power and an independent Power, although semi-Sovereign. If the inhabitants of the Transvaal territory show that they are not capable of "complete self-Government," but, on the contrary, encourage or allow disruption, discord, or revolution, whether it comes from the refusal of just rights of citizenship which are agreeable to the ideas of civilisation of the Power from whom the Transvaal inhabitants have accepted the grant, or from any other cause, he may feel that his Suzerain, that feudal superior to whom he owed the feudal allegiance which is connected with the title, might have good grounds for recalling a gift which pre-supposed that the recipients possessed the elements of self-Government. No one can be better aware than OOM PAUL that a form of Government which does not possess the confidence of the people is one which in South Africa at the present moment might constitute a danger of untold and alarming proportions.

GREAT BOULDER.

CONSEQUENT upon the most satisfactory report issued this week by the directors of the Great Boulder Proprietary Gold Mines (Limited), there has been a hopeful activity displayed in these shares in particular, and in the West Australian securities in general. Of such a report as this the market was in great need, for it has long lain in too dormant a state, and public interest and confidence sadly wanted rekindling. This report has performed so useful a service, and it will be strange if apathy again prevails after this vigorous awakening. As we have already said, the report is most satisfactory, and should arouse and cheer the most despondent. It records brilliant achievements, and is full of encouragement and promise. Amongst the attractive côterie of West Australian mines the Great Boulder holds a place in the very front, and it is destined to make that position more and more secure and lasting. At least this is what the present indications foreshadow. If they do not realise their promises it will be passingly strange, if not miraculous, but as in mining extraordinary and unaccountable things do happen, we must not hold in contempt this possibility. The profit and loss account shows a respectable net profit for the year of £83,284 5s. 5d. Already three interim dividends of 2s. per share have been paid out of this, and the directors propose to pay a final dividend of 2s. The four will absorb the sum of £64,000, and after paying income tax, and appropriating close upon £5635 to mine development account, the directors are able to carry forward the substantial balance of £11,387 6s. 7d. The quality of the ore, as revealed by the output, has been almost phenomenal, the yield per ton being over 6 ounces. Up to January 7 of the present year 4291 tons were crushed, yielding no less than 26,663 ounces of gold, of a value of £107,023 13s. 2d. For the first months of the financial year—namely, from April to August, only a 10 stamp battery was in operation, which in the latter month was increased to 15 stamps, five stamps of the Leviathan battery being used. A list of the first year's crushings are worthy of record, and we accordingly append them:—

CABLED RETURNS OF CRUSHINGS.

Date.	Own Battery View Mine.		on Lake 10 stamps.		Leviathan Battery Leased.		Total.	
	Tons.		Ounces.		Tons.	Ounces.	Tons.	Ounces.
1895.								
April 16....	33	..	331	..	— ..	— ..	33 ..	331
May 10	128	..	1,289	..	— ..	— ..	128 ..	1,289
May 25	142	..	1,276	..	— ..	— ..	142 ..	1,276
June 8	120	..	1,017	..	— ..	— ..	120 ..	1,017
June 22....	161	..	1,282	..	— ..	— ..	161 ..	1,282
July 6	157	..	1,227	..	— ..	— ..	157 ..	1,227
July 20	190	..	1,706	..	— ..	— ..	190 ..	1,706
August 3 ..	176	..	1,596	..	— ..	— ..	176 ..	1,596
August 19..	160	..	1,310	..	— ..	— ..	160 ..	1,310
September 2	102	..	871	..	290 ..	1341 ..	392 ..	2,212
September 16	146	..	1,160	..	257 ..	1135 ..	403 ..	2,295
October 1 ..	149	..	1,298	..	196 ..	581 ..	345 ..	1,879
October 15..	102	..	761	..	255 ..	992 ..	357 ..	1,753
October 28..	65	..	543	..	220 ..	912 ..	285 ..	1,455
November 12	71	..	557	..	180 ..	512 ..	251 ..	1,069
November 26	79	..	569	..	211 ..	643 ..	290 ..	1,212
December 9..	125	..	810	..	117 ..	453 ..	242 ..	1,263
December 24	98	..	705	..	112 ..	394 ..	210 ..	1,099
1896.								
January 7 ..	135	..	897	..	114 ..	495 ..	249 ..	1,392
January 21..	112	..	761	..	140 ..	617 ..	252 ..	1,378
February 3..	148	..	953	..	93 ..	269 ..	241 ..	1,222
February 17.	127	..	794	..	— ..	— ..	127 ..	794
March 2....	157	..	886	..	57 ..	178 ..	214 ..	1,064
March 17 ..	164	..	750	..	210 ..	626 ..	374 ..	1,376
March 31 ..	197	..	954	..	170 ..	286 ..	367 ..	1,240
April 13* ..	386	..	1,398	..	153 ..	425 ..	539 ..	1,823
Totals....	3630	..	25,701	..	2775 ..	9859 ..	6405 ..	35,560

* Including new battery.

The position of the company is, however, much more satisfactory and sound than is revealed by the statement of accounts, for the superintendent engineer states that the company has 1950 tons of tailings at its own mill, and 1500 tons at that of the Leviathan Company, estimated to contain 3150 ounces of gold, valued at £12,600, which valuable asset is not included in the accounts. Machinery for treating these tailings is now being erected, as well as a battery of 20 further stamps for general crushing, 10 of which are now in use, and 10 on the way to the mine, having been delayed in transit. Thus, when these are in operation they will greatly increase the output, and add to the future profits of the company. The Great Boulder, therefore, enters upon a new financial year with splendid prospects, the results of which are likely to show a marked superiority over those for the past year. Already, the monthly figures have shown a substantial increase in the number of tons crushed and the yield of gold. The profits are likely to be augmented too by the reduction of working costs. The initial work has now been completed, and better arrangements now exist in all departments. The railway also will be, within a few months, within 4 miles of the property, thereby materially cheapening the cost of all supplies. Negotiations have been opened up with a view to extending the railway, so as to connect the mine with the main line. Then there will be the revenue from the treatment of tailings; the increased crushings from the additional stamps; and the economies to be introduced. All these will tell favourably upon the results for the current year. But the report contains a statement even more encouraging, and that is the average of 6 ounces per ton is likely to be maintained. Then, again, the prospects are greatly improved by the probability of subsidiary companies being floated as soon as the development work is sufficiently advanced, and there is no doubt that considerable profits will be derived from this source. It is not to be wondered at, therefore, that the shares have shown a considerable advance, and that a bullish tone has prevailed. It is to be hoped it will be the precursor of many brilliant successes on the part of other West Australian companies.

NOTES AND COMMENTS.

THERE seems no end to the kaleidoscopic-like changes which in quick succession are coming over the South African situation. The latest development, occasioned by the publication of the cypher telegrams, is undoubtedly the gravest of all Unfortunately there does not seem to be much room for hoping that the cables are a fabrication. In London circles no one has, so far, ventured to hint a doubt on the subject. "It is now clear," says the first newspaper in the world, "that if Mr. Rhodes was not privy to the action of Dr. Jameson he was a consenting party to the preparations by which such a movement under other circumstances not defined might possibly have taken place." After all, however, a transgression—if so it is—of this character is extremely vague and hypothetical, and is not likely to meet with very severe condemnation at the hands of any English politicians who have not ruled themselves out of the discussion by the strength of the hatred which they bear towards all schemes of Imperial expansion. There are, moreover, as *The Times* admits, "circumstances under which he would have been justified in directing that such preparations should have been made." By far too great a disposition is now manifested to forget the very heavy grievances of political disqualification under which the Uitlanders have been labouring, and to exaggerate all that is questionable in the means by which they sought to bring about some alleviation of their position. After all the science of race will have to be recast if it turn out to be the fact that a vigorous hatred of and a disposition to risk life and property in the warfare against autocratic tyranny is not a fairly prominent trait in the British character, while that the position of foreign residents under the Transvaal Government has long been absolutely intolerable is a contention which few people could bring themselves to dispute without blushing. The question of the day, however, is what position the British Chartered Company now hold in reference to this matter. Nothing that has been done, so far as we can see, necessarily involves the company in their corporate capacity. Mr. Rhodes, Mr. Beit, and Dr. Harris may be invited to tender an explanation of their participation in the matter, but there is little to connect the company as a body with the regretable chapter of incidents that have latterly happened. In conclusion, it may be well to remind people that Mr. Rhodes has not yet been heard in his place, and that justice and decency demand a suspension of judgment until he has been given an opportunity of making a personal explanation.

THE annual report of Mason and Barry (Limited), which will be presented at the meeting on the 11th inst., testifies that although the output has shown a decrease on that of the previous year, still the profit is a larger one. The total quantity of ore broken at the mine was 185,463 tons, as against 196,922 tons in 1894, and the shipments during the same period (inclusive of ore from the cementation works) amounted to 186,368 tons, as against 242,386 tons in the previous year. The quantity of ore sold and invoiced for its sulphur value during 1895 amounted to 189,448 tons, as against 233,729 tons in 1894. The increased profit is consequent upon the better price which ruled for copper, the average price of G.M. copper, including Chili bars, being £42 16s., as against £40 4s. 6d. The profit realised on the year's working amounts to £27,920 7s. 1d., which, after adding the balance brought forward from the previous year of £3651 5s., makes together the sum of £31,571 12s. 1d. After deducting from this sundries, £346 8s., and writing the sum of £4500 off La Sabina shares, there remains a balance of £26,725 4s. 1d. for appropriation. From this balance the directors recommend the payment of a dividend of 2s. 6d. per share, and to carry forward the sum of £3578 14s. 1d. to the next account. After the annual meeting, an extraordinary general meeting will be held for the purpose of considering a resolution reducing the capital of the company from £840,000 divided into £4 shares, to £630,000 divided into £3 shares, a resolution which, we think, will meet with unanimous favour. The prospects for the current year are brighter than they have been for some time, and we think the shareholders may look forward to still better results.

THE Institution of Mining and Metallurgy is going ahead in the attainment of the beneficial objects for which it was established, and which have in view the raising of the status of the mining engineer and metallurgist, with a resulting great benefit to the mining industry. It is, therefore, an Institution which all members of the mining profession, who have its interests at heart, as well as their own, should join, for by their united help only can we hope to remove the many evils now existing detrimental to the profession and the industry. The latest step in

the right direction which the Council have taken is one for the benefit of students, a class whose needs it were unwise to ignore by so great and influential a body. Last Wednesday a first students' meeting was held, and was so well attended, and passed off with such conspicuous success, that it must have been extremely gratifying to the Council, whom it will undoubtedly encourage to go on with the experiment. The future success of such an Institution must depend, of course, in a very large measure, upon the number of students enrolled, for in the course of time they will become qualified for associates and members, and perhaps attain to pre-eminent success in their profession. The two papers read at the meeting reflected great credit upon their authors. The longer one was contributed by Mr. A. Cooper Key, who took "Ancient Mining" for his subject, paying special attention to that carried on in Great Britain. The other was by Mr. H. F. Olds, who gave a practical description of "Sinking Two Shafts by Poetsch's Freezing Process at Onnaing, near Valenciennes, France."

THERE appears to have been two obstacles which prevented the operations of the New Guston Company during 1895 from being attended with conspicuous success. One was that the ore raised was of very low grade, and the other the considerable reduction in the marketable value of the production, while in addition the directors were called upon to meet an increase in the cost of developing the mines. The output during 1895 exceeded that of the previous year by nearly 1500 tons, and is the largest quantity raised in 12 months since the formation of the company. Notwithstanding this the revenue for the year did not show the same increase over 1894—in fact, the amount realised was over £8000 less than what it would have been had the same conditions prevailed. Of course, no one can be held responsible for this unfortunate state of affairs, as it was quite beyond the power of the most able board of directors, or the most capable mine manager to regulate either the varying character of the ore deposits, or the value of its metallic contents. However, the shareholders, bearing in mind the good returns they have received from the mine in bygone days, have patiently waited during the past three years for a revival of the old fortune, and, judging by the report of the mine superintendent, there is every reason to hope that they will shortly be rewarded for their forbearance. Captain Harvey, in speaking of the prospects of the mine, says: "From an intimate knowledge of the development of the mine, acquired through an experience of six years on the property, and after having made a close study of the ore break and of the occurrence of the ore within the break, I affirm no good reason exists why other ore bodies should not be found north and south of our present limited developments of equal or greater value than those already discovered." Few, we venture to think, will be inclined to doubt Mr. Harvey's prediction, which, if fulfilled, will be the means of again making the company a very prosperous investment. An important feature in the past year's operations has been the advantage derived from the Silverton Smelter, in which the company has acquired a considerable interest. Mr. Crowther, in fact, went so far as to assert that had it not been for the Smelter the mine would most probably have been shut down. Bearing all these facts in mind, it may confidently be expected that the prospects are hopeful, in spite of the somewhat unsatisfactory results obtained in recent years.

ALTHOUGH the shareholders may not feel highly pleased with the result of the past year's operations in connection with the American Belle Mines, there is abundant reason why they should not for the present cease to put their faith in the property. Perhaps the most promising feature in the company's outlook is the proposal to reopen the Hudson Mine, which, it will be recollected, was closed down for several years in consequence of the low price of copper and the absence of any demand for the class of ore obtained. Another inducement held out to the directors to adopt the recommendation of the mine superintendent is that it has been discovered that the high grade ores already known to exist in the Hudson Mine can be treated by the company's own smelter. In regard to the National Belle Mine, Captain Harvey points out that the future of this depends in no small degree on the discovery of valuable ore at a greater depth than the shaft has been sunk up to the present. "Looking at the extensive surface outcroppings on the property," says Captain Harvey, "the strength and size of the north ore body in the upper levels, and accepting the experience of other mines in the neighbourhood as that which may be expected to occur in this mine also, I consider the prospects exceedingly good for the further discovery of ore under our surface ore deposits." Acting on the opinion of so reliable a man as Mr. Harvey, the directors, it may truly be said, are acting most judiciously in again deciding to carry out his suggestion. As Mr. Crowther pointed out at the meeting on Wednesday, in the event of the reopening of the Hudson Mine, and the further exploration of the National Belle Mine, being attended with the success anticipated by Mr. Harvey, the company would be placed in a very satisfactory position. In the meantime, it is consoling to know that the expenditure of the company has been materially reduced, and that the directors are doing everything that is possible to maintain a position, whereby they will be able, in the event of the profits being increased, to at once declare a dividend without having first to consider any liability that might reasonably have been incurred in more unfavourable times.

OUR readers will remember that in April of last year we published a series of articles on "Gold Mining in Wales," written by our Special Commissioner. Since that date the work of developing the properties has progressed steadily, and the Government has now taken another step with a view of encouraging *bonâ fide* gold mining in the Principality, by giving those interested the option of continuing to pay their royalties under the old sliding scale, or of paying a new and fixed royalty. Under the former system the royalty varied from 1-100th to 1-15th, according to the gold contents of the ore, and it has been now decided to grant all new leases upon a fixed royalty of 1-25th, for Crown setts, and of 1-50th for private setts. Holders of existing leases or tackuotes have the choice of continuing under the old, or of accepting the new system, but in all future leases and renewals the sliding scales will be discontinued. There is, unfortunately, a general idea among the public that the Government is hard and exacting, and imposes practically prohibitive terms for the working of gold in Wales. This is far from being the case, for our experience is that the Office of Woods is willing to do all in its power to encourage the legitimate working of the mines, while the natural facilities of the district in railways, roads, and water power are incomparably superior to those existing in the colonial gold districts. As to the lodes themselves, our Commissioner fully described them last year, and since then the milling returns of the principal mines show that at least ½ ounce of gold per ton of ore may be relied upon, and the working costs are 3 dwts.

THE directors of the Ottos Kopje Diamond Mines (Limited) have issued a circular to the shareholders which is not calculated to greatly cheer them, for it displays a critical condition of affairs, which can be relieved only by the shareholders putting their hands into their pockets and disburdening themselves of what superfluous cash they may possess. Fresh capital is urgently needed, and if it be not provided then the property is lost to the shareholders. The idea of reconstruction has been abandoned, and a scheme has been formulated for leasing the mines to a developing company. In the opinion of the directors and their legal counsel, this is the alonly practic scheme available, and if the shareholders refuse to support it by subscribing for shares in the new company, then foreclosure by the debenture holders will ensue, "and," in the ominous words of the circular, "therewith entire extinction of your interests as shareholders in this company, must unavoidably follow." Thus the inevitable is placed before the shareholders, and it is for them to decide whether they have already had enough, or whether they will spend more money in the hope that eventually it will be repaid them with interest. Their answer will, of course, depend upon the prospects of the company. The directors consider that its value as a diamond-producing property has been proved. "With our dearly-bought experience," they mournfully say, "and under the prudent management of Mr. Thomas Rickard, the task of proving the blue ground, of the richness of which we have such cheering evidence, to a depth of 300 feet, should be accomplished within 12 months of its commencement." We neither envy the directors nor the shareholders. The former must expect to encounter vigorous opposition, and the latter have a problem to solve which will afford them no pleasure, intellectual or otherwise.

MR. PETER WATSON is right in his often expressed view that shareholders in the Leadhills Silver-Lead Mining and Smelting Company (Limited) have abundant reason to congratulate themselves upon being, corporately speaking, still alive. In preserving by the most careful management and the greatest foresight their concern from joining the unhappy ranks of the failures which are already sufficiently large in this particular class of mine, the directors have accomplished a feat that deserves grateful recognition from the proprietary. The charge of a lack of energy brought against the management is the very last one that can reasonably be sustained. Exploration works have been carried on with a vigour which has proved wholly satisfactory to the mining lord, in whose interest it is that there should be as much done in this direction as possible. So far, the results have fairly balanced themselves, and have been sufficiently encouraging to warrant the continuance, upon the same liberal plan, of the tentative works in the future. It is, moreover, not only the fact that the company is in existence after so long a career, but also that its financial position is an excessively healthy one. In the past the capital has been, as the phrase goes, judiciously "nursed," and it is owing to this fact that the company are able to hold out so well in their opposition to the low values prevailing in the lead market. Without this, as the Chairman explained, a loss rather than a gain would have been encountered. All, however, which ends well is well, and the shareholders may put the dividend declared on Wednesday last into their pockets with a feeling of satisfaction in the ownership of a good mine, and of acknowledgment towards the directors who have worked so heartily together towards bringing the mine into a successful state.

THE Pearl Central Gold Mining and Exploration Company seems to be struggling on against the colossal obstacles of lack of capital, water, and labour. However, these struggles are not unattended altogether with failure, though the results, so far, are not of a brilliant character. However, notwithstanding the troubles of the past year, the results have shown a material and promising improvement. The accounts for the past half-year, ending December 31, 1895, show a balance to the credit of profit and loss of £15,888. In November last the capital of the company was increased to £400,000 by the issue of 200,000 shares for the purpose of acquiring from the Rand Mines (Limited) 27½ deep level claims, and 40,000 shares were issued at 35s. to provide £70,000 working capital. Through the acquisition of these claims the property now consists of 66½ Main reef claims, of which about 46 have the south reef leader intact, and about 54 Main reef and South reef. The Chairman considers the source of the troubles to have been the want of capital from the company's inception. This, however, has been now remedied, and it is to be hoped that, the other difficulties being surmounted, the results during the current half-year will still manifest further improvement. In October and November last the battery was shut down for want of water, and the scarcity of native labour. This, of course, tended to decrease the output. The general manager's report states that the total ore reserves at the end of the year was 36,838 tons as against 54,382 tons in his previous report. This, of course, shows a considerable reduction, but it is satisfactorily explained by the fact that no development was done below the 5th level in contemplation of sinking the new incline shaft. The prospects of the company are certainly brighter than they have ever been, and we think the Chairman has much ground for assuring the shareholders that with a little more patience their labours and anxieties will be rewarded, and that they will rejoice in the payment of dividends.

THE prospects of the Glenrock Consolidated (Limited) are brighter at the present moment, probably, than they have ever been, and they are certainly most encouraging. The directors have recently issued a circular to the shareholders describing the position of the company, from which the latter can easily estimate what the prospects are. This circular we publish *in extenso* elsewhere, and we would invite our readers to peruse it carefully, for it is worthy of serious consideration. First of all there is the Premier Mine, in New Zealand, which property comprises the Premier, Orient, Amante, Queen Victoria, Gladstone, and Sunrise claims, over 100 acres in extent, together with 30 heads of stamps, tramway, and cyanide plant. Up to the present this mine has produced about £35,000 worth of gold, and the indications are encouraging. Further, Mr. W. H. Tinney has been despatched to West Australia in order to look about him, and, if possible, to secure good properties for the company. Great advantages are likely to result from this policy, as well as large profits to the shareholders. Already a property called La Marguerita has been acquired which, on the surface, shows great richness. It is a 24 acre block, and is situated in the Coolgardie gold field. A solid reef, we are told, 5 feet wide has been proved to a depth of 40 feet, and a shaft will be continued to a depth of 80 or 90 feet to prove the value of the ore at greater depth. Furthermore, the directors have recently authorised the purchase of a 12 acre block in the Kurnalpi district, strongly recommended by Mr. Tinney. It is intended to form a company to take over and develop this block, which should give, in the words of the circular, "a handsome profit to the shareholders," who will be given the first right of applying for shares.

WHILE there is some reason for regret among the shareholders of the Oceana Development Company as to the slowness with which development is proceeding upon their properties, they have at least the satisfaction of knowing that in this case a moderate rate of progress is coincident with safety. By relegating the work of prospecting their own properties to another syndicate, the company at least protect themselves from any great loss, while the benefits that would accrue to them, if success eventually attended the work of exploration, would be very substantial in character. Prospecting for diamonds is, as the Chairman remarked, a rather expensive luxury, and though diamonds are known to exist in exactly similar geological conditions to those obtaining in the company's territory, the success hitherto attained has not been sufficient to justify the directors in regretting that they did not embark upon the work themselves. As to gold, more encouraging news has been received. Some of the company's farms are almost surrounded by properties that are being vigorously worked, and every step in development that is taken by the companies owning them throws an additional light upon them. It may be observed that the company's prospects are various in character, and that its success is not indissolubly bound up with any particular line of industry. When the present clouds have passed away from the South African horizon there is reason to hope that the development of the whole country will go ahead, and the Oceana Development will undoubtedly progress with it.

JOHANNESBURG NOTES.

By H. BUSH M.E.

NEW CHIMES.

The value of the ore being put through the mill at present shows a considerable falling off, and the profits are very small, but on the lower levels an improvement has taken place.

VAN RYN ESTATE.

The new 80 head mill is now almost ready to make a start. Powerful machinery for both hauling and crushing will be provided, and the equipment will be a first-class one. The mine development shows ore of a good value, and everything is very promising.

BUFFELSKLOOF.

Now that labour is getting more plentiful, work will be pushed ahead. The reefs opened up are looking well, and still further improvement is shown in the lower levels, where good payable ore is continuous. These shares will see a much higher figure, and are an excellent purchase.

NEW RIETFONTEIN.

The reef recently intersected which promised to give such good results is again looking irregular, and the value depreciating.

NEW ORION.

This mine will shortly start again. The picking up of the reef, which is of its usual good grade, shows permanency, and, in spite of rumours to the contrary, everything is looking well.

WHITE ROSE.

The work of development is being actively pushed ahead at this mine, and the necessary machinery is being ordered. I understand that Mr. Goodwin, of the Durban Roodeport Company, is at present on the ground making a report for the directors, which I learn from a side wind is likely to be extremely favourable, and should make the shares boom.

IRON AND STEEL INSTITUTE.—In accordance with previous announcements, the autumn meeting of the Iron and Steel Institute will be held at Bilbao in September next. To convey the members to Bilbao, and to serve as a floating hotel, the s.s. *Ormuz*, 6031 tons register, 8500 horse power, one of the finest of the Australian liners belonging to the Orient Steam Navigation Company (Limited) has been detailed. The steamer leaves London (Tilbury) on August 29.

WE understand that the issue of an important West Australian property at Menzies will be made next week under the auspices of Mr. John Waddington, who was so prominent in the flotation of the Great Boulder Proprietary Gold Mines (Limited).

THE MINING MARKET.

FRIDAY MORNING.

A Stock Exchange holiday prevents the discussion of the sensational disclosures at Pretoria.—West Australians rising.—Miscellaneous neglected.

THE Stock Exchange has three special holidays in the course of the year—namely, the first business days in the months of January, May, and November. By a remarkable coincidence the most startling news calculated to affect the fortunes of the South African market by way of the Chartered Company has come to hand upon one or other of these special occasions when the closing of the House has prevented immediate dealings, and it may be panic. It will be remembered that the news of Doctor Jameson's march upon Johannesburg was received from hour to hour during New Year's Day, and that the suspension of business was then regarded as the salvation of the speculative position. Writing on this May Day morning, with Throgmorton Street a desert, and brokers and dealers scattered over the country in the pursuit of pleasure, we find ourselves confronted with the startling exposure of the game which has been played by the wire-pullers of the Chartered Company, as laid bare in the incriminating telegrams put in at the Pretoria trial, and made public here for the first time by the morning papers. The immediate conclusion must be prejudicial to the Chartered Company, and already the clamour has arisen afresh for the cancelment of the Charter. This sensational turn of events completely nullifies everything that has taken place in the market during the past week, as far as it can be regarded as having a bearing upon the future. It is not our province in this place to discuss the political aspect of the question, or to speculate upon the fate of the Reform leaders, whose actions assume so altered a form in the light of this morning's news. All that we are called upon to do is to chronicle the actual occurrences of the past week.

Saturday was making-up day in connection with the End-April Settlement. The Account was, if anything, smaller than ever, and the carry-over was completed early in the day. Rates were almost the same as at the previous Settlement, whilst differences were chiefly in favour of the bears, the dulness of business having resulted in drooping prices. Dealings for the New Account were not on a large scale. The only news that the market had to go upon was President Kruger's definite refusal of the invitation to visit England. This had been so far anticipated as to have practically no effect. On the other hand, the knowledge that some 10,000 additional native miners were ready to go to work on the Rand was accepted as sufficient reason for imparting a cheerful tone to the Kaffir Circus. The Account in Westralians was light enough, but Contangos ruled rather heavier than in the African section, the average rates being 8 per cent. against 6. As soon as dealings commenced for the new account, Great Boulders and Lady Lochs took a decided lead in the upward direction, giving a cheerful tone to the whole market. There was nothing going on in Miscellaneous. On Monday the South African market showed a strong tone on the news of the defeat of the Matabele and the assurance that Buluwayo was amply provisioned. A general small rise was established in Gold shares, and Westralians were decidedly good, the feature again being Great Boulders. The chief features in the Miscellaneous section was the strength of Broken Hills, which were largely bought, and increased firmness in Indians. On Tuesday markets were steady until the later dealings, when the news came of the death sentences passed upon Colonel Rhodes, and Messrs. Hammond, Phillips, and Farrar. This caused a general depression, though a heavy break was prevented by the profit-taking of bears. Westralians were strong during the earlier part of the day, Hannan's Brownhill being the special medium of activity. Indians attracted fair attention, and Copper shares were good. On Wednesday the market opened dull, still under the influence of the Pretoria sentences, but there was not much selling, and when the news came that the death sentences had been commuted, the market hardened up, closing decidedly good under the lead of Chartered, which were bought by apparently well-informed people. A stupid statement, published by some of the evening papers to the effect that Mr. Barnato, in disgust at the sentences, was selling or had sold the landed properties of his own firm as well as those of the Bank and Consolidated Company, was not taken seriously by the market, and its prompt contradiction followed as a natural event. A firm tone continued in Westralians, and business was rather more active in Indians. The Settlement was brought to a satisfactory conclusion. On Thursday matters were quiet in anticipation of the holiday today. Rand shares were inclined to go better, and an almost general advance was shown in Westralians, whilst Indians were strong. As already mentioned, to-day is a holiday, and as the Stock Exchange Steeplechases are fixed for to-morrow, it is not to be anticipated that any great desire to deal will manifest itself unless the startling news of to-day brings up to town many leading men who would otherwise be suspicious by their absence.

South Africans.

As suggested in the opening, this morning's news puts the position of the Chartered Company in so different a light that it appears useless to traverse the arguments which have been used during the week as levers for moving the price of the shares up or down. We must, however, record the fact that a new issue of shares to provide the indemnity to the Transvaal Government has been freely discussed, and in so circumstantial a way that 2½ has been fixed upon as the price of issue of new shares as being more desirable in the general interest than the creation of new debentures. The net result of some extensive dealings was that on Thursday night Chartered shares were 1/8 lower on balance at 31/8. Goldfields advanced to 12⅜ on Monday, but had a severe decline on Tuesday, finally recovering so as to show a gain of 1/8 at 12 7/8. The Preference Shares and Debentures are unchanged at 25s. 6d. and 109½ respectively. Gold Trusts are only ⅛ better on balance at 8⅛, but Goldfields Deep have been steadily bought, and close 1⅛ better at 10¼. Rhodesian properties have been fairly well supported, though changes are not important. Small gains are shown in Rhodesia Exploring at 6, Mozambique at 1 3/8, Mashonaland Agency at 2 1/8, Exploring Land and Minerals at 1 1/8, Adler's Consols at 1 7/8, and Bechuanalands at 1 5/8. New Africans at 3⅛, Austral African at 1, Willoughby Consols at ⅛, Orange Free State at 3⅛, and African Estates at 2⅛ maintain last week's prices. One or two important gains are shown in the Barnato Group. Ginsberg has put on ⅛ at 2, Balmoral ⅛ at 3, and Glencairn 1/8 at 3 1/8. Amongst the shares which have scored less important gains are Banks at 1⅞, Johannesburg Water at 2 1/8, Langlaagte Royal at 2⅛, New Primrose 5⅛, and Spes Bona at 1⅛. On the other hand, May Consolidated at 3, Rietfontein at ⅛, and Buffelsdoorn at 2 1/8 are slightly below last week's prices. The only feature in the Robinson Group has been the strength of Randfontein, which were 3⅛ buyers on Thursday morning, relapsing later to 3⅛, which is only the turn to the good on the week. East Rands have been supported in spite of the severe sentence upon Mr. George Farrar. The shares are slightly better at 6 1/8, and the subsidiaries are also harder, Comet at 2 1/8, and St. Angelo at 4⅛. Anglo-French Explorations have put on 1/8 at 5 1/8, and Kleinfontein are ⅛ up at 4. Deep Level properties generally are higher. Rand Mines have put on a full point at 29⅛, and Champ d'or Deep at 2 1/8, Roodeport Deep at 3⅛, Consolidated Deep at 5⅛, Geldenhuis Deep at 6⅜, and Nigel Deep at 1⅞, have all scored gains not exceeding ⅛. In the Eckstein Group dividends have been deducted in the case of Heriot, Jubilee and Wemmer, which are all proportionately better in consequence. Modders have put on ⅛ at 8⅛, but Simmers at 21, Ferreira at 20, Henry Nourse at 7, and Salisbury at 4⅛, remain on last week's mark. Crown Reefs have all but recovered their 10s. dividend at 11⅛ x.d., and Knight's, Durban Roodepoort, and Meyer and Charlton have all scored ⅛ or so in advancing to 6⅛. Shebas are a shade harder at 2 1/8. Wolhuter has improved ⅜ to 8⅛, Village Main Reef ⅛ to 6⅜, and Worcester ⅛ to 4⅛, whilst others are generally sufficiently near last week's prices to make individual mention unnecessary. The Lydenburg Group has been steady with Spitzkops 1s. 6d. up at 15s. 6d. Diamond shares have been enquired for, and Jagers have risen ⅝ to 10¼ and De Beers 7/8 to 28 7/8.

West Australians.

The West Australian market has been generally healthy, but the real activity has been confined to a few specialities. Great Boulders have been taken in hand, and run up from 8 to 9⅝, on a remarkably encouraging annual report, and a crushing showing 3⅛ ounces to the ton on nearly 1000 tons. Brownhills were the feature of Wednesday, and close ⅜ higher at 7⅛, after dipping to 6⅛. Associated were flat on Wednesday with sellers at 1⅛. They rallied strongly on Thursday, and close ⅛ down at 1 1/8. Lady Lochs have been persistently bought, as have Lake Views, both marking gains of ⅛ at 4⅜. Golden Horseshoes have risen 1/8 to 1 1/8, Boulder Main Reef ⅜ to 1 5/8, North Boulder 1s. 6d. to 12s. 6d., Hannan's Proprietary ⅛ to 1 1/8, Hannan's Reward 7/8 to 4, and Iron King ⅛ to 1⅛. The White Feather Group is harder all round, without any sensational change. White Feathers are 2⅜, Wealth of Nations 1⅜, Ejudina 1 1/8, and Black Flag 1⅛. The Menzies Group has commanded attention, and gains of ⅛ or so are shown on Gold Estates at 1 1/8, the Reefs at 1⅜, Florence at 1 1/8, and Lady Shenton at 2 1/8. W. A. Gold Fields have advanced 5/8 to 7 1/8, and Hampton Plains 5/8 to 4⅛. Mainland Consols are in good demand at 3, and Golden Crowns have put on ⅛ at the same figure. A feature has been the strength of Coolgardie Gold (Sherlaw's), which close 1/8 up at 1 5/8, the Subsidiary Sherlaw's Gold, where crushing has commenced, being steady at 13s. Murchison New Chums have spurted 2s. to 10s. 6d., and Blackett's have put on 1s. 6d., at 9s. 6d., but Kintore are specially flat at ⅜. The Finance Group is firm at previous prices.

Miscellaneous

The French Market must take the credit of a strong upward movement in the Rio Tinto shares, which close 1⅜ better at 20⅛. Anaconda have sympathetically added 1/8 at 6⅜, and Mason and Barry are a shade harder at 3⅛. Broken Hills close below the best on realisations, the Proprietary shares being the turn easier at the close at 2⅛. British, after rising to 27s. 6d., are 1s. 3d. better at 25s. Gibraltar Consols have risen ⅛ to 1. Mount Morgan has lost the turn at 3⅜. Indians have had their periods of strength, but at the close the largest gain is ⅛ in Mysore at 6, with Nundydroog at 2⅛, Ooregum at 3 1/8, and the Preference at 3⅛, all the turn better. Haurakis have lost 1s. 3d. at 14s. 3d., and Kapanga 6d. at 14s., but Waihi are maintained at 6⅜ and Waitekauri at 4⅜. Charters Towers are steady at previous prices for the heavier shares, whilst gains of 1s. are marked in Carrington at 3s. 3d. and New Queen at 7s. 6d.

STOCK EXCHANGE SETTLING DAYS.
CONSOLS.

Wednesday, May 6.
MINING MAKING-UP DAYS:
Monday, May 11 | Tuesday, May 26
MINING NAME DAYS:
Tuesday, May 12 | Wednesday, May 27
ACCOUNT DAYS:
Thursday, May 14 | Friday, May 29
HOLIDAY: Monday, May, 25

DIARY.

Monday, May 4.

Caratal Mining Company, Winchester House, 3.

Tuesday, May 5.

Tin Ticketing, Tabb's Hotel, Redruth, 11.
Ottos Kopje Diamond Mines, Cannon-street Hotel, 12.
Day Dawn P.C. Gold Mining Co. (Limited), Win. Ho., 2.
Sugar Loaf 25 Mile Cement Leases, Winchester House, 2.
Julia Taltal Nitrate, Cannon-street Hotel, 2.
London and Westralian Mines and Finance Agency, Cannon-street Hotel, 2.30.
British and Westralian Mines and Share Corporation, Cannon-street Hotel, 2.30.

Wednesday, May 6.

Great Boulder Proprietary, Winchester House, 2.30.

Thursday, May 7.

Iron and Steel Institute, Institution of Civil Engineers, 10.30.
Beaconsfield Diamond Mining Co., Winchester House, 12.

Friday, May 8.

Iron and Steel Institute (*continued*).
Empress of Coolgardie Gold Mines, Winchester House, 11.
Shamrock Gold Mining Company, Winchester House, 12.30.

MESSRS. H. A. WATSON AND CO., of 4, Rumford-place, Liverpool have taken into partnership Mr. George Anthony Williams, who has held the procuration of the present firm since its commencement in 1890.

WE understand that the issue of an important West Australian property at Menzies will be made next week, under the auspices of Mr. John Waddington, who was so prominent in the flotation of the Great Boulder Proprietary Gold Mines (Limited).

Dividend warrants for the 20th dividend of 1s. per share (free of income-tax) have been posted this day to all shareholders of the DE LAMAR MINING COMPANY registered on the company's books on March 31.

The amount mentioned as to the credit of profit and loss account in the NEW RIETFONTEIN ESTATE GOLD MINES (LIMITED) should read £177,000.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, MAY 1.

Copper.

THE G.M.B. market opened firmer on Monday with business in spot G.M.B.'s at £45 7s. 6d. and forward at £45 15s. Spot improved to the extent of 2s. 6d. on Tuesday morning, but the improvement was not maintained, and the moderate quantities offering gradually led to the prevalence of somewhat lower values, spot changing hands on Wednesday at £45 3s. 9d., and three months at £45 11s. 3d. Spot then rallied for a moment to £45 6s. 3d., but on Thursday the tone was at first dull, but firm at the close, and business was done at £45 2s. 6d. and £45 7s. 6d. s.c., and £45 10s. to £45 13s. 9d. three months. To-day's market was somewhat influenced by disappointment that the statistics did not show a larger improvement, though this amounted to over 1100 tons for the fortnight, but we closed firmer again at £45 6s. 3d. sellers of s.c., and £45 12s. 6d. sellers of three months. There is no special feature to report in connection with the American market, which keeps quiet but steady, with moderate offers to Europe.

Tin.

This market opened a shade better at £59 12s. 6d. s.c. Straits, and further improved to £59 15s., whilst three months was done at £60 5s. to £60 7s. 6d., whilst Australian tin is now quoted at about 30s. premium. On Tuesday values moved up to £59 17s. 6d. s.c. and £60 10s. three months Straits, but sales being pressed in one or two quarters the advance was checked, and £59 12s. 6d. was accepted on Wednesday for spot. Thursday's market passed off quietly at about the last prices, and to-day, after business at £59 15s., and £59 16s. 3d. s.c., and £60 2s. 6d. three months. The two positions closed steady at £59 15s. to £59 17s. 6d., £60 7s. 6d., and £60 10s. respectively for Straits, and about 27s. 6d. more for Australian. In the Dutch market, the value of Billiton varied very little, s.c. being quoted at fl 36 to 36¼, and three months at 36¼ to 36⅜. To-day's quotations were fl 36 and fl 36¼ three months. Billiton and spot Banca fl 36¼.

Pig Iron

opened in Glasgow at 46s. 6d. for Thursday, and the same price was then paid for cash, which subsequently improved to 46s. 9½d., a month being done up to 46s. 11½d. Easier rates followed, the lowest touched being 46s. 3½d. on Thursday, whilst a moderate amount of business was done each day. To-day's market was flat at 46s. 4½d. and 46s. 4d. cash, and the closing quotations were 46s. 4¼ s.c. sellers, and 46s. 6½d. a month Scotch, 47s. 7½d. s.c. hematite, and 37s. 8d. cash Middlesbrough. The Scotch shipments for last week totalled about 7000 tons—or (say) 1400 tons increase compared with the parallel period of 1895.

Lead

has taken an upward turn, and buyers are showing more desire to operate, whilst sellers are stiffer in their ideas. The close is steady at £11 2s. 6d. soft foreign, and £11 7s. 6d. English.

Spelter

continues in strong demand, and values have been further enhanced, the close being £16 7s. 6d. to £16 10s., ordinaries, and £16 12s. 6d. to £16 15s. specials.

Antimony

is steady at £30 to £30 10s.

Quicksilver

likewise steady, and quoted at £6 15s. firsts, and £6 14s. 6d. seconds.

The following are to-night's (May 1) prices of metals:—

	£ s. d.	£ s. d.
Copper.		
Tough cake and ingot	49 0 0	49 5 0
Best selected	49 15 0	50 5 0
Electrolytic Copper	50 10 0	52 0 0
Sheets and sheathing	—	56 0 0
Flat bottoms	—	59 0 0
Chili bars	—	42 0 0
Good merchantable, spot, & 3 months respectively	45 6 3	45 12 6
Copper tubes, seamless	—	0 0 7½
Alloys.		
BRASS: Wire	—	0 0 5½
,, Tubes (solid drawn)	—	0 0 6½
,, Sheets	—	0 0 6
PHOSPHOR BRONZE: Alloys II.	—	78 0 0
,, ,, III. (Cog Wheel Brand)	—	81 0 0
,, ,, VII.	—	83 0 0
,, ,, XI.	—	74 0 0
,, ,, Vulcan brand A1	—	12 0 0
DURO METAL	—	72 0 0
BULL'S METAL	—	65 0 0
Ferrobronze (Vivian's).		
Ingots ...per lb.	0 0 5¾	—
Ordinary sheets, plates, bolts and bars	0 0 6¾	—
Screw bolts and nuts	0 0 8¾	—
Pump rods, plain	0 0 7¾	—
,, finished	0 0 10¾	—
DELTA METAL: No. 4 (per ton)	—	—
,, Sheets and plates (per lb.)	—	—
,, Bars, round, square, flat (per lb.)	—	—
,, ,, hexagon (per lb.)	—	—
Tin.		
English, ingots, f.o.b.	—	64 0 0
,, bars	—	65 0 0
,, refined	—	66 0 0
Straits, spot and 3 months respectively	59 17 6	60 10 0
Australian spot, and three months respectively	61 5 0	61 17 6
Banca ,, (in Holland)	61 5 0	61 7 6
TIN PLATES: Charcoal, best quality ...per box	0 14 3	0 17 0
,, ,, ordinary	0 10 6	0 13 6
,, Coke, best quality	0 9 6	0 10 0
,, ,, ordinary	0 9 0	0 9 3

These price of tinplates are f.o.b. at Swansea; at Liverpool 6d. per box more.

Iron.		
Pig, G.M.B., f.o.b., Clyde, spot	—	2 8 4½
,, Scotch pig, No. 1 Gartsherrie	—	2 18 6
,, ,, Coltness	—	2 13 0
,, ,, Clyde	—	2 10 0
,, ,, Govan	—	2 7 6
Bars, Welsh, f.o.b. Wales	—	5 5 0
Plates ,,	—	6 5 0
Bars, Staffordshire, at works	—	5 5 0
Sheets ,, ,,	—	6 10 0
Plates ,, ,,	—	6 7 6
Hoops ,, ,,	—	5 15 0
Ship plates, Middlesborough	—	5 1 3
STEEL: English spring	—	10 0 0
,, ,, cast	—	42 0 0
,, Rails at works, according to section	—	5 0 0
Lead.		
Spanish or soft foreign	—	11 2 6
English pig, common	—	11 7 6
,, L.B.	—	11 12 6
,, sheet and bar lead	—	12 5 0
,, pipe	—	12 15 0
,, red	—	14 10 0
,, white	—	17 10 0
,, patent shot	—	16 0 0
Spelter.		
Silesian ordinary brands	16 7 6	16 1
,, special brands	16 12 6	16 15 0
English Swansea	—	16 15 0
Sheet Zinc	19 5 0	19 10 0
Antimony.		
Antimony	30 0 0	30 10 0
Quicksilver.		
Flasks, 75 lbs. warrants	6 14 6	6 15 0
Manganese.		per unit.
Ore, c.i.f., U.K. ports		
1st quality, 50 per cent. and upwards	0 0 11	0 1 1
2nd ,, 47 per cent. to 50 per cent.	0 0 10	0 1 0
3rd ,, 40 ,, 47 per cent.	0 0 9	0 0 11
Aluminium.		
98-99½ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)	—	Per lb. 0 1 5
do do (1 ton lots)	—	0 1 4½
Nickel.		
98-99 per cent. guaranteed	0 1 8	0 2

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay*, Antimony; *A*, Arsenic; *Bl*, Blende; *Bz*, Borax; *C*, Copper; *D*, Diamond; *G*, Gold; *I*, Iron; *L*, Lead; *M*, Mundic; *N*, Nitrates; *P*, Phosphates; *Q*, Quicksilver; *R*, Ruby; *S*, Silver; *S-l*, Silver-lead; *Sul*, Sulphur; *T*, Tin; and *Z*, Zinc. * in the "Amount of Share" column of British Mines signifies that the mine is conducted on "Cost Book" principles;] in the "Head Office" column of African Mines signifies that the address given is not that of the head office, but of a sub, or transfer office; and †, following the names of African Mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

*** The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

AFRICAN MINES.

Name.	Closing Price, Apr. 30, 1896	Closing Price Apr. 24, 1896.	Am't. of Share	When last XD and Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£		£ s. d.			
Abbott's Con. Reefs	6/ 7/	6/ 7/	1 C	—	1 0 0	—	De Kaap	Broad Street Avenue
Alder Consolidatd	1 1/16 1 1/16	1 1/16 1 3/16	1 0	—	1 0 0	250,000	—	1, Moorgate places.
Afrikan Estates.....	2 1/16 2 3/16	2 2 1/4	1 0	2/6 rtsOc.16'95	1 0 0	438,600	"	3, Copthall-buildings
" Gold Revry.	1 1/4 1 1/4	1 1/8 1 3/16	1 0	rts Oct 30 '95	1 0 0	175,000	"	23, College Hill.
Africans	9/16 11/16	9/16 11/16	1 0	—	1 0 0	1,075,000	—	34, Clement's lane
Afrikander	1 1/8 1 1/4	1 1/16 1 1/16	1 0	rts May 24 '95	1 0 0	40,000	Transvaal.	23, College Hill
Alexandra Estate G	11/16 13/16	11/16 13/16	1 0	—	1 0 0	225,000	Rand	16, George street
Anglo-French Exp.	5 5 1/2	4 13/16 4 15/16	5 0	15% Aug 29 '95	5 0 0	30,300	S. Africa	3, Princes street
" Matabeleland	2 1/4 2 3/4	2 2 1/2	1 0	—	1 0 0	39,750	Matabld.	Winchester House.
Appantoo .... G	— —	— —	1 0	—	1 0 0	77,685	West Cost	Dashwood House.
Aurora .... G	1 1/8 1 1/8	1 1/8 1 1/8	1 0	5% Mar. '93	1 0 0	65,000	Rand	8, Old Jewry.
" West United.	1 1/4 1 1/2	1 1/4 1 1/2	1 0	—	1 0 0	100,000		7, Lothbury
Austral-African ...	1 5/16 1 1/16	1 5/16 1 1/16	1 0	3/-Dec. 16'95	1 0 0	250,000	"	Token.Ho., OpthilAv
Bakhs Eersteling G	2/9 3/3	2/9 3/3	10/	—	0 10 0	520,000	Transvaal	85, Gracechurch-st.
" Land	5/3 5/9	5/6 6/-	10/	1/ Feb. 13, '96	0 0 0	520,000	"	"
Bantjes Consol ...G	4 4 1/8	3 15/16 4 1/16	1 0	rts Sep 24 '95	1 0 0	83,000	"	15, Geo. st., Mn Ho.
Barnato Bank	2 1/16 2 1/16	2 1/16 2 1/16	1 0	—	1 0 0	2,625,000	—	7, Lothbury
" Consol ...	2 1/16 2 1/16	2 1/16 2 1/16	1 0	—	1 0 0	1,000,000	—	"
Barrett.. ....G	11/ 11/6	11/3 11/9	10/	—	0 9 0	207,496	De Kaap	17, Basinghall-street
Bechuanaland Exp.	1 1/16 1 1/16	1 1/16 1 1/16	1 0	rts Jy 24 '95	1 0 0	400,000	Bechuana.	19, St. Swithin's-lane.
" Trad g Assoc.	1 1/4 1 1/2	1 1/4 1 3/4	1 0	5 pc Jan 16, 96	1 0 0	100,000	"	72, Basinghall street
Ben Trovato	1/2 3/4	3/8 3/4	—	—	—	—	—	2, Austin Friars.
Big Golden Quarry	/6 1/	/6 1/	5/-	—	0 5 0	483,226	Kaap River	Warnford Court,
Block "B" Lang.	1 1/16 1 1/16	1 1/16 1 1/16	1 0	—	1 0 0	535,000	Rand	8, Princes-st., E.C.1
Bonanza	2 1/8 2 1/4	2 1/8 2 1/4	1 0	—	1 0 0	2 0,000	Turffont'n	120, Bishopsgate-st.
Brit. S. A. Char. ..	37/16 39/16	37/16 39/16	1 0	rts Jy 26 '95	1 0 0	1,999,750	S. Africa	15, St. Swithin's-lane
Buffelsdoorn..... G	2 1/4 2 1/2	2 1/16 2 1/16	1	16/-Nv. 28 '95	1 0 0	250,000	Potchefstr	7, Lothbury.
" Central	1/2 3/4	3/4 3/4	1 0	—	1 0 0	—	—	8, Old Jewry
" Consolidated	3/4 7/8	7/8 7/8	1 0	—	1 0 0	225,000	—	Warnford Court
Cape Asbestos	3/4 1	3/4 1	1 0	—	1 0 0	50,311	Orange Rv	19, St. Swithin's-lane
" Copper C	2 1/2 2 1/2	2 1/16 2 1/16	2 0	2/6 Dec.16, '95	2 0 0	300,000	Cape Col.	9, Queen-street-place,
" 6% Pref, ...	2 1/2 2 3/4	2 1/2 2 3/4	2 0	2/6 Dec.16, '95	2 0 0	45,000	"	" "
Cassel Coal.....	1 5/8 1 3/4 xd	1 1/16 1 1/16	1 0	1/8 Apr. 29 '96	1 0 0	75,000	Johannbrg.	99, Cannon-street.
Cen. de Kaap	1/3 1/9	1/3 1/9	5/-	—	0 2 6	—	De Kaap	Palmerston Bldgs
" Roodp's Deep	2 2 1/4	2 2 1/4	1 0	—	1 0 0	240,000	—	126, Bishopsgate st.
Champ d'Or..... G	2 2 1/4	1 7/8 2 1/16	1 0	3/2 Feb. 27 '96	1 0 0	116,016	Rand	8, Old Jewry, E.C.
Charterland G.F	1 1/16 1 1/8	1 1/16 1 1/8	1 0	—	1 0 0	150,000	—	19, S. Swithin's lane
Chimes West	1 1/8 1 3/8	1 1/4 1 3/8	1 0	—	1 0 0	150,000	—	Winchester Ho.
City and Sub.N.w G	4 3/8 4 3/8	4 1/8 4 3/8	4 0	10/- June'95	4 0 0	340,000	Rand	Gresham Ho.
Con. Buitfontein D	33/ 34/	33/8 34/6	1 0	9d, Jan. 16 '96	1 0 0	721,500	Griqualand	62, Lombard-st
Con. Deep Levels G	5 1/4 5 3/4	5 1/4 5 3/4	1 0	4/- Jy 11 '95	1 0 0	187,250	Transvaal	30, St. Swithin's-lane
Con. G. Fields S A.	12 3/8 12 1/2	12 12 1/4	1 0	20/ Nov. 14 '95	1 0 0	1,250,000	S. Africa	8, Old Jewry.
Do. 6 % Pref.	25/3 25/9	25/6 26/-	1 0	7 1-5d Dc30'95	1 0 0	1,243,999	"	"
Do. 5½ % Deben...	104½ 109½	108¼ 109¼	5 0	5¼ Jan. 2 '96	5 0 0	600,000	"	"
Crown Deep .....G	10¾ 11¼	10¾ 11¾	1 0	—	1 0 0	250,000	Rand	120, Bishopsgate-st.
" Reef .....G	11¼ 11¾ xd	11¾ 12	1 0	10/-Apr. 29 '96	1 0 0	120,000	"	"
DeBeers Consol. D	28¾ 28¾	27¾ 28¼	5 0	15/- Jan. 16 '96	5 0 0	789,791	Kimberl'y	62, Lombard-street.
Do. 5% 1st Deb....	108¾ 109¾	108¾ 109¾	—	5% Jan. 2 '96	—	£3,500000	"	"
Do. 5½% Sul. Ob.	102 104	102 104	—	5½% Oct, '95	—	720,000	"	Warnford Court
Doornkop	4/6 5/6	4/6 5/6	1 0	—	1 0 0	250,000	Doornkop	Winchester Ho,
Driefontein	2¼ 2¾	2¼ 2¾	1 0	—	1 0 0	175,000	—	28, Leadenhall-bldgs
Durban Roodept. G	6½ 6¾	5¾ 6	1 0	3/- Dec. 16 '95	1 0 0	£125,000	Rand	"
" Deep.....	3⅞ 3⅞	3¾ 3⅞	—	—	—	—	—	"
Eastleigh .....G	1 1⅛	1 1¼	1 0	—	1 0 0	240,000	Klerksdrp	57, Leadenhall Street
East Orion..... ..	⅝ ⅝	⅝ ⅝	1 0	—	1 0 0	275,000	Rand	8, Old Jewry.
" Rand..... G	6 1/16 7 1/16	6 1/16 6 1/16	1 0	—	1 0 0	570,000	"	170, Winchester-ho.
Exploration	3¾ 3⅝	3¾ 3¾	1 0	5/- Mar. 12 '96	1 0 0	148,000	S. Africa	30, S. Swithin's-ln.]
Exploring L & M...	1¾ 1⅞	1 5/16 1 7/16	1 0	2/ Dec. 16, '95	1 0 0	216,215	"	19, "
Ferreira .....G	19½ 20⅛	19¾ 20¼	1 0	13/ Mar. 12 '96	1 0 0	45,000	Rand	120, Bishopsgt st, Wn]
French Rand	3 3¼	2¾ 2¾	1 0	—	1 0 0	480,000	Rand.....	28, Austin Friars.
Geldenhuis Deep G	6 6⅛	6 6⅛	1 0	—	1 0 0	265,000	Transvaal .	30, St. Swithin's-lane.
Geldenhuis Est. G	4¾ 4⅝	4¾ 4¼	1 C	6/- Jy 26 '95	1 0 0	187,500	Rand	120, Bishopsgt st, Wn]
" Main Reef	1 15/16 1 15/16	1 15/16 1 15/16	1 0	2/ Feb, 13 96	1 0 0	150,000	"	Warnford Court, E.C
George Goch ...G	2 1/16 2 1/16	2 1/16 2 1/16	1 0	—	1 0 0	100,000	"	Johannesburg.
Ginsberg New ...G	1 15/16 2 1/16	1 15/16 1 15/16	1 0	—	1 0 0	130,000	Driefton .	Warnford Court, E.C]
Glencairn .....G	3⅛ 3⅜	3 1/16 3 3/16	1 0	2/6 Feb. 13 '96	1 0 0	200,000	Rand	2, Drapers-gardens.
Gld. Fls. Deep...G	10 10¼	8⅞ 9⅝	1 0	—	1 0 0	600,000	S. Africa	8, Old Jewry.
G.F. of Lydenb'rg	2⅝ 3	2¾ 3	1 0	—	—	—	Lydenb'rg	7, Lothbury.
G. F. of Mashonld.	⅜ ⅜	5/16 7/16	1 0	—	1 0 0	200,000	Mashonld.	19, St. Swithin's-ln.
G.F. of T.de Fuego	4/- 4/6	4/3 4/9	—	—	—	—	—	"
Graskop .....G	4/9 5/3	4/9 5/3	5/-	2½% Mar. '92.	0 5 0	400,000	Lydenburg	2, Tokenhouse Bldgs
Gt. Estrn. Collery	1 1¾	1 1¾	1 0	—	1 0 0	376,666	Grootolei	5, Finch Lane
Griqualand W.....D	8⅜ 8⅝	8¾ 8⅝	10 0	4/ Jan 16, '96	10 0 0	105,700	Transvaal .	62, Lombard-street
Heidelbg. Est. Ex:	⅞ 1	15/16 1 1/16	1 0	—	—	—	Heidelbg .	
Henderson's Trans	2¼ 2⅜	2¾ 2¼	1 0	—	1 0 0	250,000	Zoutpanbg	85, Gracechurch st.
Henry Nourse ...G	6⅞ 7⅛	6⅞ 7⅛	1 0	—	1 0 0	100,000	De Kaap ...	Warnford-court.
Hetty	⅝ ¾	⅝ ¾	1 0	—	1 0 0	110,000	Middlevel.	55, Bishopsgate st Wn
Joe's Reef .....G	5/16 5/16	5/16 5/16	1 0	—	1 0 0	57,464	"	21, Mincing Lane.
Johannesbrg Invst	3⅜ 3¾	3⅜ 3½	1 0	20% Oct, '95	1 0 0	650,000	—	7, Lothbury.
" Pioneer	9¼ 9¾ xd	10¾ 10¾	1 0	12½% Nov.,'93	1 0 0	21,000	Rand.....	Johannesburg.
Jubilee .....G	9¾ 9¾ xd	9 9½	1 0	4/ Apr. 29 '96	1 0 0	30,000	"	8, Old Jewry.†
Jumpers .....G	7 7¾	6⅞ 7⅛	1 0	6/- Mar. 27 '96	1 0 0	100,000	"	120, Bishopsgt st, Wn]
" Deep.....	3¼ 3⅝	3¾ 3⅝	1 0	—	1 0 0	300,000	"	30, S. Swithin's lane.
Kimberley .....D	⅜ ⅜ pm	⅜ ⅜ pm	1 0	2/ Jan 16, '95	0 10 0	98,672	Kimberley	19, Finsbury circus.
" Rdpt....	2¼ 2¾	2¼ 2¾	1 0	—	1 0 0	125,000	"	2, Drapers-gardens.
Klerksdorp	14/6 15/	15/- 16/6	10/-	—	0 9 0	400,000	Klerksdorp	110, Cannon St.
Knight's Deep	2¼ 2½	2½ 2¾	1 0	—	1 0 0	295,194	Rand.....	8, Old Jewry
Koffyfontein .....D	1 1¾	1 1/16 1¼	1 0	—	1 0 0	125,000	Jacobsdal	6, Gt. St. Helen's.
Lancaster	1 15/16 1 15/16	1 15/16 1 15/16	1 0	—	1 0 0	236,500	Luip. Viei	120, Bishopsgt st. Wn
Langlaagte Est. G	5⅝ 5⅞	5¼ 5¾	1 0	5/ Feb 13 '96	1 0 0	470,000	Rand.....	59, Holborn Viaduct
" Royal	2¾ 2⅝	2 5/16 2 7/16	1 0	rts. Mar. 6 '95	1 0 0	100,000	"	2, Drapers-gardens.
" Star...	1⅞ 2¼	1⅞ 2⅛	1 0	—	1 0 0	170,000	"	"
Lisbon-Berlyn ...G	5/9 6/3	6/- 6/6	2/6	—	0 2 6	889,233	Lydenburg	Suffolk House,
Lon. Paris Fin & M.	1¾ 1¾	1¾ 1¾	1 0	—	1 0 0	500,000	—	53, Old Broad Street.
London & S. A. Ex.	14 14½	14 14½	10/	4/- Mar. 12 '96	0 10 0	100,000	S. Africa ...	19, Finsbury-circus.
Lulpaards Viei Est.	1⅝ 1¾	1⅜ 1⅝	1 0	6% Mar, '90	1 0 0	319,003	Rand.....	Warnford-court.]
Lydenburg Estate.	1 15/16 1 15/16	1 15/16 1 15/16	1 0	—	1 0 0	190,000	Lydenburg	85, Gracech, Street
" Ld & Expl	¾ ⅞	¾ ⅞	1 0	—	1 0 0	200,000	"	120, Bishopsgte St.
" M'g. Est.	4¾ 5	4¾ 5	1 0	—	1 0 0	300,000	"	"
Main Reef (New) G	1⅝ 1¾	1 5/16 1 15/16	1 0	—	1 0 0	111,503	Rand.....	15, George St., MnH
Malmani Gold Syn	5/6 4/6	3/6 4/6	2/6	—	0 2 6	200,000	Transvaal	Throgmorton House.
Marie Louise.....	2⅞ 3½	2⅞ 3½	1 0	—	1 0 0	60,000	Rand.....	15, George St , Mn H
Marievale Nigel ...	1 1¾	1 1¾	1 0	—	1 0 0	250,000	"	"
Mashon. Agency...	2½ 2¾	2 1/16 2 3/16 xd	1 0	2/ Ap. 16 '96	1 0 0	100,000	Mashonald	8, Old Jewry, E.C.
" Central...	⅞ 1	⅞ 1	1 0	—	1 0 0	110,000	"	"
Matabeleil'd G. R'f	3¾ 4	3⅜ 3⅝	1 0	—	1 0 0	110,000	Matabeleil'd	3, Copthall-buildings.
May Con. (New) G	3 3½	3 3¼	1 0	2/- Mar. 12 96	1 0 0	236,500	Rand.....	4, Lothbury.]
Meyer & Charl....G	5⅞ 6¼	5⅝ 5⅞	1 0	5/ Feb. 13 96	1 0 0	75,020	"	1, Crosby Square.]
Minerva	1⅜ 1⅝	1⅜ 1⅝	1 0	—	1 0 0	150,000	—	Winchester House.
Mines Selection ...	⅞ 1	⅞ 1	1 0	—	1 0 0	100,000	—	33, Br'd St. Avenue.
Modderfontein.. G	8¼ 8¾	8 8¼	1 0	—	1 0 0	200,000	Rand.....	15, George Street
" "B" Extensn.	2¼ 2⅜	1 15/16 2 1/16	—	—	—	—	—	28, Austin Frias
Molyneux Consoll.	1 15/16 1 15/16	1 15/16 1 15/16	1 0	—	1 0 0	220,000	Modderftn	120, Bishopsgate st
Moodies .....G	1 3/16 1 5/16	1 3/16 1 5/16	1 0	-/4 May '90	1 0 0	240,000	"	Gresham House.]
Mozambique.....	1⅜ 1¾	1 5/16 1 9/16	1 0	—	1 0 0	400,000	S.E. Africa	13, Austin Friars.
Namaqua C	1¾ 1⅝	1⅝ 1⅝	2 0	2/6 July '91	2 0 0	94,351	Namaquald	34, Leadenhall-bldg.
New African	3¾ 4	3¾ 4	1 0	20/ Dec. 30 '95	1 0 0	190,000	—	83, Hatton Garden.
" Chimes..... G	1⅜ 1⅞	1⅜ 1⅞	1 C	1/- Mar. 27 '96	1 0 0	100,000	Rand.....	8, Old Jewry, E.C
" Comet	2⅞ 3	2⅝ 3	1 0	—	1 0 0	150,000	Heidelburg	Winchester-house.
" Croesus..... G	1⅜ 1⅜	1⅜ 1⅜	1 0	rts Apr 17 '95	1 0 0	255,000	Langlaagte	120, Bishopsgt.st, Wn
" Gordon..... D	6 6 7/	6/6 6/8	1 0	5% Dec. '89	1 0 0	404,344	Griqualand	110, Cannon-street.
" Heriot .....G	9¾ 9¾ xd	9¼ 9¾	1 0	4/ Apr. 29, '96	1 0 0	58,750	Rand.....	Gresham Ho HO
" Jagersf. ...D	10½ 10¾	9¼ 9¾ xd	5 0	10/ Apr. 15 '96	5 0 0	200,000	Transvaal .	5, Copthall-buildings
" Kleinfontein G	3⅜ 4	3¾ 4	1 0	12½ pc Mar, '95	1 0 0	82,500	Rand.....	Winchester House
" Midas	3⅞ 4⅛	3⅞ 4	1 0	rts Jan. 16, '96	1 0 0	150,000	Mid'le Viei	120, Bishopsgt-st, W
" Primrose ...G	6⅜ 6	5¾ 6	1 0	5/ Feb. 13, '96	1 0 0	276,750	Rand.....	2, Draper's-gardens.
" Rietfontein G	3 15/16 4 1/16	4 4¼	1 0	—	1 0 0	160,000	"	Warnford-ct., E.C.
" S.Augustine D	8/3 8/9	8/ 8/6	1 0	—	0 19 0	259,137	Griqu'd W	30-1, St. Swithin's-l.
" Spes Bona...G	1⅜ 1⅝	1⅜ 1⅜	1 0	—	1 0 0	113,701	Rand.....	24, N. John-st., L'pl
" Stayn Estate]	1⅜ 1⅜	1⅜ 1⅜	1 0	—	1 0 0	115,000	Heidelber	19, Bury Street, E.C

AFRICAN MINES—(*Continued*).

Name.	Closing Price, Apr. 30, 1896	Closing Price, Apr. 24, 1896.	Am't. of Share	When last XD and Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£		£			
Nigel ..... G	3⅛ 3⅜	3⅛ 3⅛	1 0	rts Aug 10 '95	1 0 0	160,000	Rand.....	96, Gresham Ho., EC
" Deep .....G	1 13/16 1 15/16	1¾ 1⅞	1 0	—	1 0 0	195,000	Heidelberg	8 Old Jewry.
North Randfontein	1⅞ 2⅛	1⅝ 1⅞	1 0	—	1 0 0	235,000	—	8, Princes street
Nourse Deep.....	4 4⅛	4 4⅛	1 0	—	1 0 0	375,000	Rand.....	120, Bishopgt.-st., Wn
Oceana	1 11/16 1 13/16	1 11/16 1 13/16	1 0	2/-Nov. 28 '95	1 0 0	357,400	Wtrbg Lyn	13, Austin Friars,
" Developmnt	5/16 11/16	3/8 ¾	1 0	—	1 0 0	50,000	Heidelbrg.	"
" Minerals ...	¾ 1	12/16 15/16	1 0	—	1 0 0	5 0,000	"	"
Orange F.S.E. ...D	3⅛ 3¾ xd	3⅛ 4	1 0	2/6 Apr., 29, 96	1 0 0	284,000	Orange F.S.	10, Moorgate-street,
Orion (New).....G	2⅝ 2¾	2 2⅛	1 0	10% Aug, '95	1 0 0	30,000	Rand.....	8, Old Jewry.
Paarl Central ... G	1⅜ 1⅜	1 1/16 1 1/16	1 0	—	1 0 0	138,750	Transvaal .	120, Bishopsgt st, Wn
Pardy's Mozambq.	1½ 1¾	1⅛ 1⅜	10/	rts Mar 12 '96	0 10 0	60,000	S.E. Africa	Broad St. Avenue.
Piggs Peak .....G	⅜ ½	⅜ ½	1 0	—	0 17 0	200,000	Swaziland.	6, Queen-street-place
Porges Randfontn.	1⅝ 1⅞	1½ 1¾	1 0	2/ Feb. 13 '96	1 0 0	457,500	Rand	1, Bank Buildings
Potchefstroom... G	9/16 5/8	⅝ ¾	1 0	—	1 0 0	389,750	Potchefstm	19, Bury-st., E.C.
Princess Estate G	2⅞ 3	2⅞ 3	1 0	—	1 0 0	125,000	Rand.....	33, Cornhill, E.C.
Rand Central Ore	2 2¼	2¼ 2⅝	1 0	25 p c Aug. 95	1 0 0	115,000	—	8, Princes-street, E.C.
Randfontein .....G	3 1/16 3 5/16	3 2⅝	1 0	—	1 0 0	2,000,000	Rand	1, Bank Buildings
Rand Mines ..... G	29½ 30	28½ 29	1 0	—	1 0 0	332,728	"	120, Bishopsgt st, Wn
Rand-Rhodesia Ex	⅞ 1	⅞ 1	1 0	10 p.c. Oct, '95	1 0 0	25,000	R&Rhodesia	123, "
Rhodesia Ex & Dv.	6¼ 6¾	5½ 6	1 0	—	1 0 0	50,000	Mt & Mash'l	8, Old Jewry.
Robinson(SA)Bank	6 6½	6¼ 6¾ xd	4 0	4/ Apl. 15, 96	4 0 0	750,000	—	8, Prince's-street
" Deep.....	7 8	7 8	1 0	—	1 0 0	500,000	M'nR'f R'nd	120, Bishopsgate st,
" Diamond	1½ 1¾	1½ 1¾	1 0	—	1 0 0	350,000	Kaal Valley	8, Prince's street
" Gold.....	9 9¼	9¼ 9⅜	5 0	8/ Feb 13 '96	5 0 0	550,000	M. Rf.'rand	28, Austin Friars, E.C
" Randftn.	1 15/16 1 11/16	1¾ 1¾	1 0	—	1 0 0	517,000	Rand.....	8, Prince's-street.
Roodepoort Deep	3 1/16 3 3/16	2⅞ 3	1 0	—	1 0 0	170,000	"	6, Old Jewry, E.C.
Roodepoort Un. G	5⅜ 5⅝	5½ 5⅝	1 0	5/ Feb 13 '96	1 0 0	130,000	"	Warnford-court,]
Rose Deep.....	5 5⅛	4¾ 5¼	1 0	—	1 0 0	300,000	M. Rf.'rand	30-31, S.Swith's. lane,
Rothery Block.....	8/ 10/	8/ 10/	1 0	—	—	—	—	55, Bishopsgate st.
St. Angelo	4⅝ 4⅞	4½ 4¾	1 0	—	1 0 0	175,000	—	Winchester House.
St. Helen's Devel.	2⅜ 2⅝	2⅜ 2⅝	1 0	—	1 0 0	47,950	S. Africa ...	13, S. Helen's Place,
Salisbury New ...	4⅛ 4⅜	4⅛ 4⅜	1 0	—	1 0 0	99,000	Rand.....	96, Gresham Ho., EC
Sheba ..... G	2 1/16 2 3/16	2 2 1/16 xd	1 0	1/- Apr. 15 '96	1 0 0	850,000	Lydenburg	18, S. Helen's place.
Simmer & Jack...G	5 5⅛	⅝ ⅝	1 0	2/ Aug 14 95	1 0 0	250,000	Rand.....	8, Old Jewry.
S.A GoldTrustNew	8 8¼	7⅞ 8⅛	1 C	15/ Feb 27 '96	1 0 0	250,000	S. Africa ...	"
South West Rand	3/16 ⅛	3/16 ⅛	1 0	—	1 0 0	158,000	Rand	Winchester House.
Spitzkop (New) G	14/ 15/	13/9 14/3	1 0	—	1 0 0	99,070	Lydenburg	15, Bishopsgt-st, Wn
Stanhope .....G	1 5/16 1 1/16	1 5/16 1 1/16	1 0	2/- Oct 20 '95	1 0 0	34,000	Rand.....	96, Gresham Ho., EC
Sutherland R. ...G	5/ 6/	5/ 6/	1 0	—	1 0 0	220,000	Zoutpan'bg	Dashwood Ho.
Tati Concessions ...	2 5/16 2 5/16	2 1/16 2 5/16	1 0	rts Jy. 22 '95	1 0 0	392,000	—	Gresham House.
Trans. Coal Trust...	1 11/16 1 13/16 x.	1¾ 1⅞	1 0	1/-Apr. 29, 96	1 0 0	439,965	Rand.....	Broad-st. House, E.C
" Consolidatd	1⅞ 2⅛	1¾ 2	1 0	—	1 0 0	485,131	Transvaal	120, Bishopsgte st Wn,
" Est. & Dev.	1 15/16 1 15/16	1 15/16 1 15/16	1 0	—	1 0 0	428,600	"	10, New Broad-st. E.C,
" Gen. Assoc.	2⅜ 2⅝	2⅛ 2¾	1 0	10/-Mar, 12 '96	1 0 0	185,000	"	30, S. Swithin's lane.
" Gold Fields	3⅜ 3½	3¾ 3¾ xd	1 0	8/- Apr. 15 '96	1 0 0	135,000	S. A. R.....	120, Bishopgt-st, Wn
" Land... ..	7/16 9/16	7/16 9/16	1 0	—	1 0 0	79,915	Transvaal .	75, Abchurch Lane.
Treasury.....G	3⅛ 3⅜	3 3 1/4	1 0	12½% Sep.'94	1 0 0	135,000	Rand.....	Warnford Court
United Exploratn.	⅞ 1⅛	⅞ 1⅛	1 0	—	1 0 0	250,000	—	120, Bishopsgte St.
Un. Ivy Reef.....G	⅞ 1	⅞ 1	1 0	2½ Jan. '94	1 0 0	45,000	Transvaal .	110, Cannon-street,
U. Langlaagte(N)G	1⅜ 1⅝	1⅜ 1⅝	1 0	—	1 0 0	146,000	Rand.....	85, Gresham Ho., EC
" Pioneer.....	¾ 1	¾ 1	1 0	—	1 0 0	75,000	De Kaap ...	16, S. Helen's-pl., E.C
" Rhodes. G F	¾ ⅞	1 1/16 1 3/16	1 0	—	0 10 0	225,500	Rhodesia...	13, George street, EC
Van Ryn ..... G	5¼ 5½	5¼ 5⅜	1 0	4/- Jan. 16 '96	1 0 0	160,000	Rand.....	18, St. Swithin's-ln,
" North ...	¾ 1	¾ 1	1 0	—	1 0 0	116,091	—	"
" West.....	3¼ 3½	3¼ 3⅝	1 0	—	1 0 0	120,000	Rand	"
Venterskroon	¾ 1	¾ 1	—	—	1 0 0	125,000	Rooderand	8, Old Jewry
Vesta	⅞ 1⅛	⅞ 1	1 0	—	1 0 0	130,000	Rand	Winchester House
Village Main Reef	6¾ 7	6⅞ 6⅞	1 0	—	1 0 0	177,000	"	8, Old Jewry.
Vogelstruis Estate	3¼ 3⅜	3½ 3⅝	1 0	—	1 0 0	200,000	"	"
" Cons. Deep ...	2½ 2⅝	2¼ 2¾	1 0	—	1 0 0	327,750	"	16, Geo. St. Mn. Ho.
Wassau .....G	¾ ⅞	¾ ⅞	1 0	—	1 0 0	100,000	Gold Coast	147, Cannon-street
Wemmer .....G	9¾ 9¾ xd	9¾ 10	1 0	10/ Apr, 29, 96	1 0 0	55,000	Rand.....	19, Bury-street,]
Western Nigel.....	15/16 15/16	13/16 15/16	1 0	—	1 0 0	207,000	Main Reef	Suffolk House.
West Rand.....G	1 1/16 1 3/16	1⅝ 1¾	1 0	—	1 0 0	240,000	Rand.....	13, Geo. St., Mans.Ho.
Willoughby's Con.	1¾ 1⅞	1 11/16 1 13/16	1 0	—	1 0 0	700,000	Mashonald	3, Copthall-bldgs.
Witwatersrand G	6 3/16 6 5/16	6¾ 6	1 0	—	1 0 0	250,000	Rand.....	19, Bury-st., E.C.
Wolhuter .....G	8 8¼	7¾ 7⅞	1 0

"THE MINING JOURNAL" SHARE LIST—(Continued)

AUSTRALIAN AND NEW ZEALAND MINES.

Name.	Closing Price, Apr. 30, 1896	Closing Price, Apr. 24, 1896.	Am't. of Share	When last XD and Dividend.	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
Achilles Gld Fld.	2/9 3/-	2/3 2/9	2/6	—	0 2 6	642,456	Otago, N.Z	11, Poultry.
Aladdins Lamp G	1⅛ 1⅛	1⅛ 1⅛	1 0	1/ Feb. 13 '96	1 0 0	100.000	c.knN.S.W	4-6, Throg. Avenue.
Anglo-Con. G. Syn	⅜ 2⅛	2⅜ 2⅛	1 0	100 % '95	1 0 0	99,000	—	22, Austin Friars.
" Founders...	5 45	35 45	1 0	£4 16/8 2-5d'95	1 0 0	1,000	—	
" French Exp	⅜ 1pm	⅞ 1 pm	1 0	5/- Oct 30 '95	0 10 0	40,000	W. Austral	79, Queen Street.
" ter.Explor.	1⅛ 1⅛pm	1 1⅛ pm	1 0	5/ Oct. 20 '95	0 10 0	50,000	,,	,,
Arrow Brownhill G	⅞ ⅞	⅝ ⅞	1 0	—	1 0 0	90,067	Cool.,W.A.	4, Gt. Winchester St.
Assoc. Gold Mines	1¾ 2	1⅞ 2	1 0	—	1 0 0	375,000	,,	20, Bucklersbury
Australasian G	3/9 4/3	3/9 4/3	1 0	-/6 Mar.,'92	1 0 0	10,000	Gymp.Q'ld	6, Queen-st. place
Australasian C	—	—	20 0	-/9 Aug. '95	7 7 6	218,315	S. Austral.	42, New Broad-street
Australian G	1/- 1/6	1/ 1/6	1 0	1/- June, '91	1 0 0	22,708	BarR.NSW	Winchester House.
Aus.Bro. Hill Con.								
Baker's Creek G	⅝ ⅞	⅝ ⅞	1 0	1/- May '95	0 17 6	500,000	H'gveNSW	Hillgrove, N.S.Wale
Bardon G	⅜ ¾	⅜ ¾	1 0	—	1 0 0	195,000	W. Austral	43, Threadneedle st.
Bayley's Reward G	4/ 5/	4/ 5/	1 0	-/4 Dec. 94	1 0 0	480,000	Coolgardie	F.&b'y. H. Bl'mf'ld St.
Big Blow G	⅜ ⅞	⅜ ⅝	1 0	—	1 0 0	150,000	,,	151, Cannon Street.
Bickett's Claim G	⅜ ⅜	⅜ ⅜	1 0	—	1 0 0	55,000	,,	16, St. Helen's Place.
Black Flag Consld.	1⅜ 1½	1⅞ 1⅝	1 0	—	—	—	W. Austral	4, Bishopsgate St. Wn
Bogroves Propty.	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	140,000	Coolgardie	1, Metal Exch. Bldgs
Bonnie Dundee G	4/— 4/6	4/ 4/6	2/6	—	0 2 6	500,000	Cerom. N.Z	Dashwood House.
Brilliant..... G	6/ 7/	6/ 7/	1 0	—	0 18 6	120,000	C. T.Q'land	16, S. Helen's Place
" Block...G	12⅛ 12½xd	13⅛ 13⅛	2 0	-/8 Apr.27, '96	2 0 0	250,000	,,	Charters Towers.
" St.Geo.G	1⅜ 1⅝	1⅜ 1⅝	1 0	-/6 Dec 16 '95	1 0 0	70,000	,,	16, S. Helen's Place
Bri. Brok. Hill S	1¼ 1⅝xd	1⅝ 1¾	10/	-/9 Apl. 15 '96	0 10 0	72,000	,,	Charters Towers.
	1¼ 1⅝	1⅝ 1¾	1 0	—	1 0 0	240,000	N.S. Wales	Dashwood Ho., E.C.
Broad Arrow	2/3 2/9	2/3 2/9	5/	—	0 4 6	100,000	W.Feather	57, Moorgate Street.
Bulwer Hill Propty. S	2⅛ 2⅜	2⅛ 2⅜ xd	8/	1/- Apl. 15 '96	0 8 0	960,000	N. S. Wales	3, Gt. Winchester st.
Burbank s'Birbd'y	⅞ ⅞	⅝ ⅞	1 0	—	1 0 0	125,000	,,	4, Gt. Winchester st
	1¾ 1⅞	1⅞ 1⅝	1 0	—	1 0 0	150,000	Coolgardie	Copthall House.
Caledonian G	1/6 2/6	1/6 2/6	1 0	—	—	120,000	W. Austral	Portland House.
Cassidy Hill G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	115,000	Coolgardie	9-10, King Street, E.C
Central sounder G	1⅜ 1⅝	1⅜ 1⅝	1 0	—	1 0 0	93,522	K'lg'rl, WA	Wor'st'r Ho., Walbr'k
" Exp. & Invst.	4⅜ 1⅛dis	4⅜ 1⅛ dis	1 0	4/8d Mar 12'96	—	—	W. Austral	1, Met. Exchg. Bldgs
" " of W.A.	1⅜ 1¾	1⅜ 1¾	1 0	1/7½Mar 27 96	1 0 0	122,000	W. Austral	2, ,,
Charters Tow. ...G	1/ 1/8	1/3 1/9	10/	—	0 9 6	200,000	Queensind	110, Cannon Street
" Consolid....	/8 1/	/6 1/	10/	—	0 9 6	300,000	,,	110, ,,
Colonial Finance...	4 4¼pm	4 4¼pm	1 0	10/ Mar. 27 '96	0 10 0	21,140	W. Austral	139 ,,
" Gold Fields	¾ ¾ pm	⅜ ⅜pm	1 0	—	0 12 6	75,250	,,	70, Cornhill.
Con. G. M. of W. A.	⅛ ⅜	⅛ ⅜	1 0	—	1 0 0	246,779	Pilbarra ...	30, Moorgate Street.
" Murchison ...	13/16 13/16	⅝ ¾	1 0	—	1 0 0	225,533	Murc.,W A	Broad Street House.
Cont. S.W.A. Trust	1 1⅛	⅞ 1⅛	1 0	—	1 0 0	104,467	W. Austral	Broad Street House.
Chingarlie Gold ...	1¼ 1⅜	1 1⅛	10/	1/ Feb. 15 '96	0 5 0	90,000	Cool. W.A.	Broad Street Avenue
" Mint & I.Kg.	1⅛ 1¼	1⅛ 1⅛	1 0	—	1 0 0	150,000	,,	30, S. Swithin's la.
Crown Con. ... G	1/6 2/6	1/6 2/6	8/	-/3 June '94	0 4 8	100,000	Queensind	30-1, S. Swithin's-la.
Crown So. United	2 2¼	1 1¼	1 0	—	1 0 0	115,000	Hann's WA	Blomfield House
Crown United.....	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	75,000	—	110, Cannon-st., E.C.
Cumberld (New) G	/9 1/3	/9 1/3	1 0	2/6 Dec., '87	0 19 0	184,690	Queensind	Blomfield House.E C
DayDawn E.&W.G	12/ 12/6	12/ 12/6	1 0	-/6 Mar 12 '96	1 0 0	498,400	,,	16, S. Helen's Place
" P. C. G	2/9 3/3	3/3 3/9	1 0	-/6 Apr., '92	1 0 0	490,000	,,	Winchester Ho.,E C
Deborah G	1/6 2/6	1/6 2/6	1 0	—	0 18 0	120,000	Victoria ...	71-72, King Wm. St,
Dgh's Nest.....	par ¼ pm	par ¼ pm	1 0	—	1 0 0	72,500	Mt.Margrt	Finsbury House.
Explorers Synd. ...	pa ¼ pmxd	par ¼ pm	1 0	—	0 5 0	9,000	W.Austral	Copthall House
Flagall M'fs, Extd	⅜ ⅝	⅜ ⅞	1 0	1/4 Jan. 16 '96	1 0 0	150,000	"	4, Sun Court
Florence..... G	1¾ 1⅞	1¾ 1¾	1 0	—	1 0 0	60,000	"	18, St. Swithin's la
Ghaliar Cons.....	1⅝ 1⅝	1⅝ 1⅝	1 0	—	1 0 0	300,000	N S W ales.	6, Queen-street-place
Gladstor ..... G	⅞ 1⅜	¾ 1	1 0	—	1 0 0	—	W. Austral	43, Threadneedle st
Gonrock ..... G	1/9 2/3	1/9 2/3	1 0	—	0 8 0	225,000	N. Zealand	3-6, Queen-st, E.C.
Golden Cement G	5⅛ 5½pm	5⅜ 5¾pm	1 0	—	0 10 0	—	W.Austral	79, Queen Street, E.C.
" Crown... G	2⅞ 3	2½⅛ 2⅝⅛	1 0	—	1 0 0	100,000	,,	77, Bishopsgate-st.
" Gate..... G	/6 1/6	/6 1/6	10/	—	0 10 0	150.000	Queensind	34-36, Gresham-st.
" Horse Shoe....	1⅝⅛ 1⅞⅛	1⅝⅛ 1⅞⅛	1 0	—	1 0 0	—	W.Austral	13. Helen's Place
" Link ..... G	1½⅛ 1½⅛	1⅝⅛ 1½⅛	1 0	5/- Oct 30 '95	1 0 0	90,000	,,	9-10, King Street, E.C
" Plum..... G	1⅝⅛ 1⅞⅛	1⅝⅛ 1⅞⅛	1 0	—	1 0 0	120,000	,,	4, Bishopsgate Street
Golden Crown G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Gate G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Link G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Mile G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Queen G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Reward G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Star G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Treasure G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Wedge G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Golden Wonder G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Gt. Boulder G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Gt. Fingall G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Gt. Fingall Con. G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Gt. Fingall Reefs G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Gt. Fingall Syndt. G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Gt. Fingall United G	1⅛ 1⅜	1⅛ 1⅜	1 0	—	1 0 0	100,000	,,	4, Bishopsgate Street
Gt. Fingall Wonder

RIPANJI QUICKSILVER AND SILVER MINES (LIMITED).

The circular just issued to the shareholders reports that since the issue of the last circular the erection of the new engine and boiler at the mine has been vigorously prosecuted, and the manager reports that this machinery will be shortly at work, and the further development of the mine below the present levels proceeded with. In the present levels the manager reports further important discoveries of ore of good quality, and he considers that everything points to the probability of still richer ore in depth. The dressing plant has been uninterruptedly at work since March 12 last, but the loss in dressing is still considerably more than it ought to be. The returns from the mill for the five weeks ending April 18 amount to 35·019 kilos. of concentrates. The directors anticipate that, as they have now secured the services of a specially qualified dresser, who is about to proceed to the mine to take charge of the mill, they will soon be in a position to report much better results in this respect. Whilst using every endeavour to improve the dressing the directors have not neglected examining into additional methods of treating the ores, and the particular process referred to at the last general meeting has been further practically dealt with. Fifty tons of ore sent from the mine is now being treated in England by this process to prove whether, on a large scale, the favourable results so far reported as obtained on a small scale are realised. Information of the results, when obtained, will be at once communicated to the shareholders.

REPORTS FROM THE MINES.

BRITISH MINES.

CARN BREA.—April 24: Highburrow east. We are not in position to speak of any change in our points of operation since our last through the hindrance in our development caused by the water being in whilst changing one of the H pieces and doing other work in Harvey's shaft. We are pleased to say since we put the engine to work again the water has been forking satisfactorily, and is now down to the bottom level (334). We recommenced working in the 322 level east early this week, and hope to resume the sinking of the engine shaft on Monday next. The shaft is down about 17 fathoms below the 334 fathom level, and we expect to complete the lift to the 354 fathom level in another five or six weeks. We consider there is a very important change in the general character of the lode and its surroundings in the 334 fathom level end west. The underlie is very much less, not more than from 12 to 18 inches south with a good footwall. We have been gaining in south to prove its width, but although we have cut in from 5 to 6 feet, have not yet met with the south wall. The lode produces good stones of tin, and we hope soon to be able to give it a good value. The lode in the 322 end east is large, over 7 feet wide, and of a very promising character, worth £10 per fathom. The rise in the back of this level is up 4 fathoms, lode worth £10 per fathom; when this rise is communicated to the 310 fathom level the ventilation will be improved, and it will render available a section of stoping ground. The lode in the 310 end east is worth £9 per fathom. We purpose driving this level again after the communication of the above-mentioned rise. —E.B. west. The lode in the rise in back of the 310 fathom level west of cross cut west of shaft is worth £7 per fathom. Our stopes here are worth on an average £12 per fathom.—(Signed) W. T. White, John Daddow, Wm. Thomas, John Penhall.

WEST KITTY.—St. Agnes, Scorrier, Cornwall, April 30: The rise in back of the 24 fathom level west of Reynolds' shaft is worth £9 per fathom. The 72 fathom level driving west of Reynolds' shaft, the lode is about 2 feet wide, and worth £7 per fathom. The 60 fathom level driving west of Reynolds' shaft, the lode is 3 feet wide, has a very kindly appearance and is worth £7 per fathom. The rise in back of 60 fathom level, the lode is 4 feet wide, and worth £8 per fathom. We have cut plat at the 60 fathom level at Thomas' and the shaft men have commenced to sink the shaft below the 60 fathom level. The 60 fathom level driving east of Thomas' shaft, the lode is 3 feet wide, and worth £10 per fathom. The stopes and tribute pitches continue to yield the usual quality of tin.—(Signed) John Williams, Joel Hooper.

WHEAL METAL AND FLOW.—Progress report dated May 1:—Wheal Metal. We have continued the drivage westward on the Metal lode, which is now in 180 feet from the shaft. The lode is moderately hard, and yields a little tin for the stamps. Cock's shaft is now cleared down to the adit level and the water is lowered about 30 feet below that level. The crosscut is cleared to the south lode, where we have cut a leader of tin which has a very promising appearance. We have erected a derrick at the south shaft for the purpose of making a milling test on ore from this lade.—Wheal Fortune. The new stonebreaker and petroleum engine are on the ground and in process of erection.

COLONIAL, INDIAN, AND FOREIGN MINES.

BALAGHAT MYSORE.—Thomas Richards, April 13: Report for the fortnight ending April 11.—Ogle's shaft. The drivage of the 370 south near the southern boundary has been resumed, and the level has been advanced 21 feet, total distance from the crosscut east 381 feet. The quartz 5 inches wide assays 4 ounces, 14 grains of gold per ton.—Raines' shaft. The 418 feet level north crosscut east has been extended 1 foot, total distance 69 feet 8 inches. Lode matter, consisting of patches and stringers of quartz interspersed with iron pyrites, is now being met with in this crosscut, a sample from which assays 9 dwts. 19 grains of gold per ton, but the footwall of the lode has not yet been reached.

EMERALD REWARD.—The mine manager (Mr. James Penberthy) reports as follows for the week ending March 30: Point No. 1 new shafts (main shaft). This is let to four men to sink at 35s. per foot, with an additional 5s. per foot for securing with timber. Work will be begun on Monday first (16th inst.).—Shaft No. 1 (late tribute department). This is still being continued by two men. The vein bearing about north has been communicated to the old workings and consequently I shall commence to stope the back of the level where the vein will average from 6 to 8 inches wide and produce good quartz for milling. The lode in the south end is still bearing in that direction and has withid the last two days been 10 inches wide and producing a fair quality of quartz. The lode in the present end is small having met with a harder formation.—Shaft No. 3a. The crosscut will be sufficiently extended this week to enable me to drive east and west to intersect the different veins.—Point No. 3, shaft No. 1c. The lode in the end is still small, but producing quartz of a very low quality. The lode in the end has improved by a vein of 6 inches wide coming in from the north side at an angle of 45°, at which angle it has passed through the lode and appears to have taken the country on the other side, while in conjunction with the lode in the face of the drift it produced very rich gold and which I am taking great care of until I get it milled. I cannot say the effect this will have on the main lode until next week.—El Dorado Consolidated, El Dorado. The four men are still opening up on the back of the lodes on this property, but so far have found nothing to recommend the continuation of labour, which is at the rate of £14 per week.—Shamrock No. 2 south. The two men driving east and west at the bottom of the shaft on contract are doing very good work. The lode in the east end is 20 inches wide, and that in the west end about 15 inches wide. The quartz of the both ends I have had sampled, and it shows a return of from 10 to 15 dwts. per ton. I have about 15 to 17 tons at surface on which I intend to commence milling as a test as soon as I get from 25 to about 30 tons. You will readily understand upon reading my last reports that this is the best sample I have yet met with, and if it continues to yield according to above sample I shall at once begin to stope the back by an additional two men.—The manager's report for the week ending March 14th states:—Point No. 1, main shaft. This was commenced last Monday, 16th inst., and the men have now sunk 12 feet. They have intersected several veins, but so far these are small and carry but little gold.—Shaft No. 1. I have two men now stoping the back of the shallow level, where the vein is from 6 to 8 inches wide, and producing gold-bearing stone. The ground is easy for working, and if the vein continues will pay fairly well. I have discontinued both ends, as the vein in each has become poor as the formation became harder.—Point 3, shaft No. 1 con. The lode in the west end is small and poor, and does not appear to be very encouraging in this direction. The lode in the east end is about 18 inches wide, and shows gold-bearing stone. The vein that came out from the north-west side (and which was referred to in last week's report as having crossed the lode) is still from 6 to 8 inches wide, and still continues its course in this direction, producing stone showing rich gold. The branch being small the output is correspondingly small. I have had only two men working at this point for the past two weeks, the other two having left, consequently the work has not gone on as well as at other times, but this being a promising point I am putting on two other men on Monday morning.—El Dorado Consolidated, El Dorado. This section of ground has, up to date, proved so unpromising that I have taken away all the men and put them to work upon the backs of the lodes at the Shamrock; here they are trenching upon new and old lodes which vary from 8 inches to 14 inches wide and at times show fine gold.—Shamrock No. 2 south. The lode both in the east and west ends at the bottom of this shaft is about 14 inches wide and of fairly good character of quartz, and from a sample (from both these ends) which I had panned off yesterday morning prospecting for from 8 to 12 dwts. per ton. The lode at these two points looks very promising, and I should not like to give them up without further trial. I have called tenders for the crushage of 20 tons of quartz from the Shamrock to the mill here.

FRONTINO AND BOLIVIA.—Mr. Libardo Botero, under date March 10, says: With respect to the working of these I enclose the reports of Messrs. Truran and Becoombe, from which you will be able to judge of the progress made. At present important repairs are being made in Maria Dama Mill, but I expect before the end of the week they will be concluded. Small showers of rain which fell during the last few nights give us hopes that shortly there may be an increase in the water supply. In the present month I expect better results, not only through decrease in cost, but also from some increase in the produce.—La Salada, March 10: To the directors of the Frontino and Bolivia (S.A.) Gold Mining Company (Limited).—Gentlemen, I beg to submit the following report on Silencio Mine, up to date:—With regard to the underground workings the mine on the whole has slightly improved. Although not to any marked extent, inasmuch as some points have changed for the better and others for the worse. The pumping shaft has been carried on with better speed, the ground still very hard. We had hoped ere this to have commenced work on the new hoisting shaft, with a view of holing with No. 7 level south, but the water, which for some time was filtering through the No. 7 end south has now stopped, thereby preventing work in the bottom of the shaft. However, we are in close proximity to the shaft, and hope to hole soon. The No. 7 end south carries a good lode, and has improved. No. 6 end south, which for some time past has been in hard, unproductive ground, at last shows signs of some change for the better. In No. 5 north the formation of the quartz we had been driving on has become greatly pinched. No. 3 end south has improved since last reported on. The Bolivia crosscut has been suspended, owing to filtration of water. — Surface Workings. At Maria Dama in the Californian mill several of the main timbers were found to be in such a rotten state that it was necessary to change them at once, which change necessitated the stoppage of four batteries for two or three days. The mill is now working again—the most important timbers having been replaced. There are still, however, several remaining in the bin and house which must come out, but this work, I think, can be carried on without stoppage of the mill. At El Salto the work of constructing the new ovens for sulphurets has been temporarily suspended. All other work progresses in a satisfactory manner. I am, gentlemen, your obedient servant, William Truran.—La Salada, March 13: To the directors of the Frontino and Bolivia (S.A.) Gold Mining Company (Limited).—Gentlemen, I beg to hand you my report on the following mines:—La Salada. In the level driving north of No. 3 crosscut the lode is 3 feet wide, producing good milling ore. About 6 feet behind the present forebreast we left the flat lode, which has a more westerly direction. A level will be driven on this later on, when we are better able to deal with the ore from the bottom of the mine. In this level south the lode is poor and pinched, but we expect it to improve in a few fathoms more driving. In the rise in back of the north level the lode is 4 feet wide, producing good milling ore. In the level driving north of No. 2 crosscut the lode is 18 inches wide, of fair milling ore. In this level south the lode is mixed up with the country rock, the quartz portion being about 2 feet wide. The lode in No. 2 rise in back of this level is 3 feet wide of good ore. The drive on the flat lode north at this level is suspended for the time being. In the level south of No. 1 crosscut we are crosscutting to the east to ascertain if we have all the lode or not as water is issuing freely from that side. There are no changes to call for any remarks in any of the other points now being worked. The stopes continue to produce good milling ore.—Cordoba. The small lode which we have followed for some months past not having opened up as we expected, we are crosscutting to see if we cannot find the main part of this lode in both levels driving north and south of the No. 8 crosscut. In the level north of No. 7 crosscut the lode has improved and is now about 10 inches wide, good ore. In the crosscut west of this level the ground is hard and progress slow. In the day level driving north near the site of the new mill Cordoba, the lode is 20 inches wide, containing some good-looking ore. The vein which we have opened upon near the Cordoba old mill is small and poor; and if it does not improve soon it will not be worth while spending any more money on it, as it is not a main lode.—Tigrito. The lode in No. 6 level west appears to be more settled, being now between two well-defined walls, and is improving in size and quality, being at present 2 feet wide, and in paydore. The stopes in the back of this level are producing fair mineral for mill. In the east level we are crosscutting to the south to intersect the lode which is thrown into that side by a cross-course. There are still some 3 or 4 fathoms to drive to intersect it.—Marmajito and Marmajon. In the level east of No. 2 crosscut the lode is small but good. In this level west the lode is 2½ feet wide, of good ore. The stopes in back of these levels continue good. The lode in No. 2 rise in back of the eastern level is poor. In No. 1 level west the lode has improved in size and quality, and is now 2½ feet wide of fair milling ore. Better progress is being made in the Playa crosscut, and we are apparently free from the large granite boulders which have been met with during the past months. The new lode met with in the Marmajon east crosscut is about 1 foot wide, producing low grade milling ore. —Surface operations. At La Salada the new hoisting engine is being erected, but it cannot be completed for some weeks as three or four parts of it have not yet arrived. Timbers for the new derrick and skiproad are being brought in, and the carpenters will commence work on it in about another week. They are now working on the engine and boiler house. The Salada new mill is not closed in. This must have early attention. At Cordoba the tramroad from the mouth of No. 8 tunnel to the mouth of No. 6 level in Tigrito Mine is being laid down to convey the mineral from the No. 7 level to the mills. The tunnel at Rosario, through which the Rosario water is to be brought to the Cordoba new mill, is being pushed on as fast as possible. This water will also help a great deal at the Tigrito, Marmajito, and Marmajon mills. At Marmajito good progress is being made with the building of the new kitchen.—Mills. Throughout the mines we have been very short of water. During the past fortnight the following number of stamps have been at work—viz., La Salada new mill 15 stamps, Cordoba (on sands) 16 stamps, Tigrito 8 stamps, Marmajito 8 stamps, Marmajon 9 stamps, total 56 stamps. The three last-named have been working at a very slow speed. I am pleased to say that all these mines, with the exception of Cordoba, are looking very well. It is only a question of time and patience with Cordoba; up to the present we have been driving through disordered ground, but we are certain of having a better lode ahead. The returns should increase as the water for stamping power increases at all the mines. I trust that the dry season is nearly over, and that we shall soon have the necessary water to work all the mills up to their full capacity.—I have the honour to be, gentlemen, your obedient servant, Alfred F. Becoombe.

NEW GORDON DIAMOND.—Report from the mine for the four weeks ending 18th inst.:—16,151 loads of blue ground treated, yielding 1552 carats of diamonds.

MYSORE.—N. Hancock, April 15: Mining operations for the fortnight ending April 13: Rowe's shaft 1450 feet level north of crosscut west. There are three stopes in the back of this level, the average width of the lode being 2 feet 6 inches giving an average assay of 13 dwts.—1400 feet level north of sump winze. The lode in the stope in the back of this level is 9 feet 6 inches wide, assaying 13 dwts. 1 grain.—1365 feet level south of crosscut. We have resumed the driving of this level. Driven 12 feet, making a total distance driven of 297 feet 9 inches. The lode is 1 foot wide, assaying 1 ounce. There are five stopes in the back of this level, the average width of the lode being 1 foot 9 inches, giving an average assay of 1 ounce 14 grains.—1360 feet level north of crosscut. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 13 dwts. 1 grain.—1360 feet level north of sump winze north-east. This level has been driven 15 feet 6 inches, making a total distance driven of 439 feet. The rise in the back of this level has been put up 9 feet, making a total height of 103 feet 6 inches, assaying 13 dwts. 1 grain. The crosscut east in this level has been driven 12 feet, making a total distance driven of 29 feet 6 inches.—1360 feet level south of sump winze. There are two stopes in the back of this level, the average width of the lode being 3 feet 6 inches, giving an average assay of 11 dwts. 12 grains.—1260 feet level north. There are four stopes in this level, the average width of the lode being 2 feet 7 inches, giving an average assay of 19 dwts. 21 grains.—1290 feet level north of crosscut. This end has been driven 20 feet, making a total distance driven of 145 feet 6 inches, the lode is 3 feet 6 inches wide, assaying 1 ounce 15 dwts.—1260 feet level south of crosscut. This end has been driven 17 feet, making a total distance driven of 166 feet, the lode is 4 feet wide, assaying 1 ounce 15 dwts.—1260 feet level south. This level has been driven 10 feet 6 inches, making a total distance driven of 238 feet, the lode is 6 inches wide, no sample taken. There are four stopes in the back of this level, the average width of the lode being 1 foot 9 inches, giving an average assay of 1 ounce 3 dwts. 19 grains.—1160 feet level north. The lode in the stope in the bottom of this level is 2 feet wide assaying 3 ounces.—1160 feet level north of crosscut. This end has been driven 19 feet making a total distance driven of 172 feet, the lode is 3 feet wide assaying 2 ounces. The rise in the back of this level has been put up 17 feet, making a total 1260 feet level south. There are five stopes in the back of this level the average width of the lode being 1 foot 11 inches giving an average assay of 16 dwts. 14 grains.—North of the crosscut east. The lode in the stope in the back of this level is 2 feet wide, assaying 1 ounce 10 dwts.—1060 feet level north crosscut east. This has been driven 8 feet, making a total distance driven of 32 feet.—820 feet level south. There are 2 stopes in the back of this level the average width of the lode being 2 feet giving an average assay of 19 dwts. 2 grains.—Crocker's shaft. This shaft has been sunk 15 feet, making a total depth of 48 feet below the 1060.—1030 feet level south. The rise in the back of this level has been put up 13 feet, making a total height of 64 feet. The lode is 4 feet wide, assaying 3 ounces.—930 feet level north. The crosscut east from the end of this level was driven 2 feet 6 inches, making a total distance of 21 feet. At this point we intersected some quartz, and have driven north on the same 18 feet 6 inches. The lode is 5 inches wide, assaying 19 dwts. 10 grains. The lode in the stope in the back of this level is 3 feet wide, assaying 1 ounce.—890 feet level south. There are five stopes in the back of this level, the average width of the lode being 4 feet 5 inches, giving an average assay of 1 ounce 1 dwt. 5 grains.—780 feet level south. We have started a rise in the back of the No. 6 stope in the back of this level, 40 feet north of the north-east level. Risen 4 feet, making a total height from the back of the level of 47 feet. The lode is 4 feet wide, assaying 1 ounce 5 dwts. There are nine stopes in the back of this level, the average width of the lode being 2 feet 6 inches, giving an average assay of 17 dwts. 10 grains.—620 feet level south. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 13 dwts. 1 grain.—236 feet level north. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 1 ounce.—Taylor's shaft. 466 feet level north. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 10 dwts.—Gilbert's shaft. This shaft has been sunk 14 feet 6 inches, making a total depth of 206 feet 6 inches below the 650.—650 feet level north. The rise in the back of this level has been put up 15 feet 6 inches, making a total height of 58 feet 6 inches. The lode is 2 feet wide, assaying 6 dwts. 12 grains.—650 feet level south. We have resumed the driving of this. Driven 10 feet, making a total distance driven of 54 feet 6 inches. The lode is 1 foot wide, mixed. No sample taken.—520 feet level north. The lode in the stope in the back of this level is 1 foot 8 inches wide, assaying 15 dwts.—520 feet level south. The winze in the bottom of this level has been sunk 2 feet, making a total depth of 56 feet, the lode is 2 feet wide, assaying 1 ounce. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 18 dwts. 3 grains.—340 feet level north. The lode in the stope in the back of this level is 2 feet wide, assaying 13 dwts. 1 grain.—290 feet level north. There are three stopes in this level, the average width of the lode being 1 foot 10 inches, giving an average assay of 15 dwts. 5 grains.—150 feet level south. There are two stopes in the back of this level, the average width of the lode being 2 ftet 3 inches, giving an average assay of 14 dwts.—Tennant's shaft, 750 feet level north of the crosscut west. This end has been driven 16 feet, making a total distance driven of 278 feet, the lode is 2 feet 6 inches wide mixed, assaying 13 dwts. 1 grain. The winze in the bottom of this level has been sunk 7 feet 5 inches making a total depth of 17 feet 6 inches, the lode is 4 feet, assaying 13 dwts. 1 grain.—530 feet level north. The lode in the stope in the back of this level is 2 feet 8 inches wide, assaying 10 dwts.—350 feet level south of crosscut. There are two stopes in this level, the average width of the lode being 2 feet, giving an average assay of 14 dwts.—Selaw's shaft. 450 feet level north of the crosscut. There are two stopes in the back of this level, the average width of the lode being 1 foot, giving an average assay of 1 ounce 0 dwts. 13 grains.—450 feet level south of crosscut. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 10 dwts.—320 feet level north. There are two stopes in the back of this level, the average width of the lode being 2 feet 6 inches, giving an average assay of 19 dwts.—Mc Taggart's shaft. This shaft has been sunk 14 feet, making a total depth of 70 feet 2 inches below the 650. The shaft is now in dyke rock.—650 feet level north of the crosscut west. This level has been driven 2 feet, making a total distance driven of 13 feet 6 inches. The lode is 1 foot 6 inches wide, assaying 15 dwts.—650 feet level south of the crosscut west. This end has been driven 10 feet, making a total distance driven of 39 feet 6 inches. There is nothing here to report.—550 feet level north. This level has been driven 1 foot 6 inches, making a total distance driven of 404 feet 2 inches. There is nothing here to report. The winze in the bottom of this level has been sunk 2 feet, making a total depth of 31 feet. There is nothing here now to report.—550 feet level south of crosscut west. This level has been driven 9 feet 6 inches, making a total distance driven of 59 feet 9 inches. There is nothing here now to report. The No. 1 winze in the bottom of this level has been sunk 9 feet, making a total depth of 70 feet. There are a few small stringers of quartz, assaying 15 dwts. The No. 2 winze in the bottom of this level has been sunk 7 feet 6 inches, making a total depth of 49 feet 3 inches. The lode is 1 foot wide, assaying 16 dwts. 3 grains.—320 feet level south. There are two stopes in the back of this level, the average width of the lode being 2 feet 6 inches, giving an average assay of 19 dwts.—Prospect shaft No. 2. 117 feet level south. This has been driven 14 feet, making a total distance driven of 53 feet 6 inches.—Ribblesdale's shaft. This shaft has been sunk 6 feet 6 inches, making a total depth of 73 feet 6 inches below the 1520. There is nothing here to report.—1520 feet level north. This level has been driven 16 feet, making a total distance driven of 166 feet. The lode is 1 foot wide, assaying 5 dwts. 5 grains.—Crosscut west from the 1060. This has been driven 13 feet, making a total distance driven of 163 feet.—Williams's shaft, crosscut east from the 173. Driving north 17 feet from the end of the crosscut. Driven 5 feet, making a total distance driven of 11 feet. Health good. The weather is very hot.

MYSORE REEFS (Kangundy).—Fortnightly report of Captain M. Scantlebury, mine agent, dated April 15: Underlie shaft. This shaft has been sunk 7 feet 6 inches, now 113 feet 6 inches below the 415 feet level. The quartz is 6 inches wide, assaying 8 dwts. 19 grains of gold to the ton. Intermediate level 60 feet below the 425 has been extended 13 feet, now 65 feet from shaft. The quartz is 2 feet wide, assaying 10 dwts. of gold to the ton.—Stope above this level. The quartz is 18 inches wide, assaying 8 dwts. of gold to the ton. 425 feet level north has been extended 11 feet, now 19 feet 6 inches from shaft. The quartz is 6 inches wide, assaying 12 dwts. 16 grains of gold to the ton. Winze below 425 level north has been sunk 3 feet 6 inches, now 51 feet below the level. The quartz is 2 feet 8 inches wide, assaying 18 dwts. of gold to the ton.—Stopes below the 425 feet level north. The quartz is 2 feet 3 inches wide, assaying 13 dwts. of gold to the ton. Stopes below the 425 feet level north. The quartz is 2 feet wide, assaying 1 ounce 15 dwts. of gold to the ton.—Vertical shaft has been sunk 7 feet 6 inches, now 331 feet 9 inches from surface. The quartz is 1 foot wide, assaying 16 dwts. of gold to the ton.—Crosscut east of 260 feet level has been extended 13 feet, now 55 feet 6 inches from level. We are still cutting through hard hornblendic schist.—Trial shaft to the east of the new north shaft has been sunk 3 feet, now 45 feet from surface. We appear to be in a pillar left by the ancient workers. There is about 1 foot of quartz, assaying 5 dwts. of gold to the ton.

NUNDYDROOG.—April 18.—Thomas Richards' report for the fortnight ending April 11:—Kennedy's shaft has been sunk 7 feet, total depth 19 feet below the 700 feet level. The 700 north has been driven 8 feet 6 inches, total distance 63 feet. Lode 4 inches wide, assays 5 dwts. of gold per ton. The 700 south has been driven 8 feet 6 inches, total distance 61 feet. Lode is 5 feet wide assaying 1 ounce 17 dwts. 13 grains. The 600 north has been driven 7 feet 6 inches, total distance 445 feet. Lode 1 foot wide, assays a trace of gold. The rise in the back of this level has been put up 15 feet, total height 59 feet. Lode 6 inches wide, assaying 3 dwts 13 grains. The 600 south crosscut west has been extended 12 feet, total distance 45 feet. Stringers of quartz of no assay value have been passed through. In two stopes in the back of the 520 north the lode averages 5 feet in width and 1 ounce 10 dwts. in assay value. In the stope in the back of the 440 north the lode is 2 feet 6 inches wide, assaying 3 ounces 15 dwts. The 440 south crosscut west has been extended 11 feet, total distance 150 feet. No change. In two stopes in the back of the 370 north the lode averages 5 feet 6 inches in width and 1 ounce 9 dwts. 9 grains in assay value. The 370 north crosscut west has been extended 11 feet, total distance 510 feet. No change. In the stope in the back of the 370 south the lode is 6 feet wide, and assays 3 ounces 15 dwts. The 300 north has been driven 6 feet, total distance 320 feet. Lode 1 foot wide assays 5 dwts. The 300 intermediate drivage north has been driven 11 feet, total distance 56 ft. 6 in. Lode is 2 feet wide, assaying 2 ounces. The lode in the stope in the back of the 300 north is 4 feet wide, and assays 1 ounce. The 230 north has been driven 2 feet, total distance 378 feet 6 inches. Lode carries a trace of gold. In the stope in the back of this level the lode is 3 feet wide, and assays 5 dwts. 6 grains. The 230 south has been driven 4 feet 9 inches, total distance 294 feet. The lode 6 inches wide, assays a trace of gold. The lode in the stope in the back of the 160 north is 4 feet wide, and assays 1 ounce 1 dwt. 6 grains. The 160 south has been driven 15 feet 6 inches, total distance 482 feet 3 inches. Lode of no assay value. The lode in the stope in the back of the 90 north is 2 feet wide, assaying 1 ounce.—North shaft. Sinking this shaft has been temporarily suspended, while tip plate are being cut at the 600 feet level. New shaft has been sunk 8 feet, total depth 102 feet from the surface. Mule shaft has been sunk 1 foot 6 inches, total depth 7 feet 6 inches below the 1160 level. Timbering the very loose ground at this point in the shaft has interfered with sinking, and adcounts for the little progress made. The 1160 north has been driven 19 feet 3 inches, total distance 54 feet 3 inches. Lode 8 inches wide assays 1 dwt. 6 grains. The 1030 feet level north having become very poor, driving in this direction has been temporarily suspended. The side stope cut at this level at about 300 feet from the shaft, to ascertain the full size of the lode has revealed a width of 20 feet at one place, and this quartz broken is of good milling value. The 1030 north winze has been sunk 7 feet 6 inches, total depth 47 feet 6 inches. Lode 5 feet wide assays 1 ounce 17 dwts. 12 grains. In the 920 north back stope the lode is 4 feet wide, and assays 8 dwts. 16 grains. The lode in the stope in the back of the 920 south is 6 feet wide, and assays 3 ounces 3 dwts. 12 grains. In the stope in the back of the 840 south the lode is 6 feet wide, assaying 5 dwts. The 680 north has been driven 14 feet, total distance 388 feet 6 inches. Lode of no assay value. The 520 north has been driven 18 feet 6 inches, total distance 474 feet. The 370 north has been driven 7 feet 3 inches, total distance 190 feet. Lode of no assay value.—Taylor's shaft. The 1240 north has been driven 7 feet, total distance 271 feet. Lode of no assay value. The 1240 south crosscut east has been extended 6 feet 9 inches, total distance 32 feet 6 inches. No change. In two stopes in the back of the 1030 north the lode averages 2 feet in width, and 8 dwts. 6 grains in assay value. In the stope in the back of the 920 north the lode is 2 feet wide, and assays 5 dwts. In two stopes in the back of the 840 north the lode averages 3 feet in width, and 13 dwts. 18 grains in assay value. The 840 south rise has been put up 8 feet 6 inches, total height 37 feet. Lode of no assay value. In the stope in the back of the 680 north the lode is 3 feet wide, assaying 7 dwts. 12 grains. The lode in the stope in the bottom of the 920 north is 3 feet wide, and assays 15 dwts. 18 grains. In the stope in the back of the 520 north the lode is 3 feet wide, assaying 6 dwts. 6 grains, and in the stope in the back of the 230 south it is 3 feet 6 inches wide, assaying 12 dwts. 12 grains.—Old mill samples. Pulp 1 ounce 1 dwt. 6 grains; tailings, 3 dwts. 3 grains.—New mill samples. Pulp, 1 ounce 7 dwts. 12 grains; tailings, 4 dwts. 12 grains.

NINE REEFS.—Mine report for fortnight ending April 13: Oriental lode, main shaft. This shaft is now 28 feet below the 310 feet level. The lode is 3 feet wide, chiefly black rock, which is intermixed with stringers of quartz and arsenical pyrites assaying 3 dwts. 8 grains of gold per ton. The 310 feet level north is now 127 feet from shaft. We have started to drive this level with rock drill. The lode is 5 feet 6 inches wide, composed of quartz, arsenical pyrites intermixed with stringers of black rock, from which no assay has been made this week. The 310 feet level south is now 110 feet 6 inches from Baynard's shaft. We shall commence driving this level in course of a day or two. Pipe fitters are now engaged in fixing air pipes here.—Surface work. Everything is going on as usual.—Health. The health of the camp continues good.

YERRAKONDA.—Fortnightly report of Captain M. Scantlebury, mine agent, dated April 15: South shaft. This shaft has been sunk 4 feet 6 inches, now 9 feet 6 inches below the 255 feet level. The lode is 4 feet wide, 2 feet 6 inches of which is solid quartz, assaying 13 dwts. 6 grains of gold to the ton. A very kindly and promising lode.—The 255 feet level south. This level has been extended 19 feet, now 137 feet 6 inches from shaft. The lode is 4 feet wide, composed chiefly of quartz, assaying 5 dwts. of gold to the ton. Winze below the 255 feet level south has been deepened 8 feet 6 inches, now 18 feet 6 inches below the level. The lode is composed of quartz and over 6 feet wide, assaying 4 dwts. of gold to the ton. We have suspended this and resumed the sinking of the shaft below the 255 feet level with two rock drills. Trial shaft north-east of Beresford's has been sunk 8 feet, now 77 feet from surface. The lode is pinched and of no value.—Health. I am pleased to say the health of the camp is fairly good.

WEST KALGURLI.—The following is from the mine manager's report: The main shaft is now down 120 feet, and the reef 3 feet 6 inches wide. The reef is highly mineralised, and we are just on the water. I expect in another 20 feet we shall have a very big supply. Two leading mine managers have informed me that the reef will carry heavy gold judging from the way the stone is mineralised, and from the character of the mineral itself. The reef is traceable, and for the most part outcrops for a distance of 3 miles or more, and with gold east and west and south of our property, and all along the line of reef.

I ZAPOPAN.—April 29: The general manager (Mr. Hillson) who cabled on March 4 that the rainy season had set in with unusual severity, and that, for the present, it would be most advantageous to the company that work should be suspended, on account of the exposed condition of the workings, or, under such conditions, the men's labour would not be of full value to the company, Mr. Hillson states that the mill had been stopped, and a clean up of 200 tons yielded 50 ounces of gold, valued at £165. Newspaper cables mention that the wet season in Northern Australia continues. The rainy season finishes about end of April, so that until May weather sets in crushing operations cannot be expected. Mr. Hillson further states that the miners had made application to be allowed to work on their own account, and that he had made arrangements with them, which, in his opinion, are very advantageous to the company—viz., that they should work on definite a block of ground at the northern end of the property, and also a large portion of the surface workings, on the southern end, near the new 15 stamp battery, the company's mill to crush the stone raised by them, and to receive 50 per cent. of the gold won. These arrangements appear so exceptionally favourable to the company, that the directors will carefully consider whether the system of letting further ground on tribute may not be extended, and so relieve the company of the responsibility of heavy mining expenditure, while at the same time they would be working profitably, and practically full-handed, other portions of this property. In a subsequent cablegram, the information that all who have visited the mines report very favourably on it, is not only satisfactory but confirms the manager's and engineer's reports from time to time received by the directors. At present there are 50 men at work under the new tribute arrangements, under the supervision of Mr. Hillson.

CRIPPLE CREEK, COLORADO.—The town of Cripple Creek, Colorado, was almost entirely destroyed by fire on Wednesday. Two persons were killed and 14 injured by an explosion.

ASSOCIATED GOLD.—Abstract of the mine manager's report fortnight ending March 11: Adelaide (Block 103°) shaft No. 4 east and west crosscuts at 135 feet level, West extended to 19 feet. East extended to 25 feet. 8 inches, Water making from west crosscut, progress impeded, ground part lode material shows improvement. Australia east (Block 72°) shaft No. 6 sunk to total 35 feet 6 inches and timbered. Shaft No. 2 crosscut driven to total 23 feet. Prospects no better. Lode 3 feet in width.—Lake View Extended (Block 101°) shaft No. 3, level and west crosscuts at 104 feet level west extended 35 feet. East extended 25 feet. Bottom of shaft opened for chamber dirt. West showing quartz leaders, dirt passing through ironstone.—Shaft No. 4. West crosscut extended to 22 feet, ironstone crosscut extended to 17 feet 6 inches. Quite different channel of ground being passed through, with good lode formation and leaders carrying gold.—Shaft No. 5. Crosscourse reef west drive extended to 31 feet. East extended to 93 feet. West drive shows improvement.—Australia block. The drive north extended to 17 feet 6 inches. Present end of drive all lode material carrying gold, and no sign of either wall.

ARROW PROPRIETARY GOLD.—The following is an abstract of the mine manager's fortnightly report ending March 25:—Gaul section. Foucher's shaft. Extended north to total of 177 feet. Lode maintains size and character and shows visible gold.—Brookman's shaft driven north to total of 73 feet, this end being pushed to connect south drive from main shaft, which will, when completed, improve ventilation and facilitate breaking and discharge of stuff for battery. Driving east side of lode for speed and economy. The crosscut at 60 feet level west driven 9 feet through the lode, which is 24 feet wide, have sunk winze on lode to connect crosscut west at 100 feet level, now down 13 feet. The lode composed of friable quartz, lithomarge, chlorite and ironstone, producing gold. The object of this winze is: 1st. Prove the lode. 2nd. Serve means of ingress and egress and when connected will be used as a footway. 3rd. Improve ventilation, and when stoping can use as Shoot pass. —Main shaft. Extended south to total of 73 feet. Lode is well defined, and producing payable work for stamps.—Barrow's shaft sunk to total of 74 feet, driving vertical nothing special to mention.—(Signed) Wm. Hambly.

HERMANES.—The following report has been received from the mine, dated Hargraund, April 27:—Rising Mine. In the rise and stope in 400 north level the men are breaking quartz of value 6 dwts. gold per ton. The lode at these places is 4 feet in width with about 10 inches of quartz. Quartz carries copper pyrites and galena, and shows gold. The 300 north level is without change since last writing. The quartz in the 200 south has a width of 15 inches, containing a quantity of mineral, and assays 4 dwts. 13 grains gold per ton of quartz. The 100 feet south level shows very promising lode 4 feet wide, with over 2 feet of quartz, assaying 8 dwts. gold per ton.—Fiadenos Mine. The men are driving the north level, and are making fair headway. The quartz in present end holds a width of nearly 2 feet, and is of good quality, containing galena and occasionally showing gold. The workings on either side of the winze from the cutting show quartz of more than average value for gold. The lode holds a width of 3 feet and carries copper and iron pyrites in bunches with a little visible gold.—Gapleskop Mine. The quartz in north level has increased in width to 18 inches and is of improved appearance. We hope to effect communication with the level above in the course of the next fortnight. Stoping in back of upper north level the men are producing some good mill quartz of value 5 dwts. gold per ton.

CHAMPION REEF.—Fortnightly report of Captain James Rowe, superintendent, dated April 6:—Daiyeli's shaft. This shaft has been sunk 3 feet, total depth below the 840 feet level 27 feet. Lode 3 feet wide, assaying 15 dwts. 21 grains of gold per ton.—Garland's shaft. We have resumed the sinking of this shaft, which has been sunk 1 foot 6 inches, total depth 1041 feet 6 inches. Lode 1½ foot wide, assaying 1 ounce 5 dwts. of gold per ton. The sinking will be slow for a short time, as we are carrying the shaft of sufficient width for bottom plat. The 1040 feet level north has been driven 27 feet 6 inches, total length 35 feet 6 inches. Lode 3 feet wide, assaying 1 ounce 12 dwts. 18 grains of gold per ton. The 1040 south driven 18 feet, total length 23 feet 9 inches. Lode 6 inches wide, assaying 1 ounce 9 dwts. 4 grains of gold per ton. This end will be suspended for a short time until we complete the cutting of room for plat. The 940 feet level north has been driven 15 feet 8 inches, total length 479 feet. Lode 5 feet wide, assaying 1 ounce 16 dwts. 21 grains of gold per ton. No. 3 rise above level risen 13 feet 3 inches, total height 41 feet 6 inches. Lode 4 feet wide, assaying 1 ounce 15 dwts. 7 grains of gold per ton. The 940 south driven 25 feet 6 inches, total length 61 feet 9 inches. Lode 2½ feet wide, assaying 1 ounce 5 dwts, 5 grains of gold per ton. No. 2 rise above level risen 16 feet 6 inches, total height 46 feet 9 inches. Lode 1 foot wide, assaying 16 dwts. 12 grains of gold per ton. The 840 feet level north has been driven 16 feet 6 inches, total length 848 feet 6 inches. Lode 1 foot 2 inches wide, assaying 11 dwts. 14 grains of gold per ton. No. 3 rise above 840 north risen 12 feet 6 inches, total height 19 feet. Lode 1 foot 3 inches wide, assaying 2 ounces 11 dwts. 11 grains of gold per ton. Level south of No. 7 rise in back of 840 north of west crosscut has been driven 11 feet 6 inches, total length 43 feet 6 inches. Lode 2 feet wide, assaying 1 ounce 19 dwts. 1 grain of gold per ton.—Ribblesdale's shaft. This shaft has been sunk 7 feet, total depth 737 feet 3 inches. During the week we shall be deep enough for the 740 feet level, and shall immediately commence driving crosscut east to cut with east part of lode. The 840 feet level south of crosscut, east of level, north of shaft, has been driven 19 feet 6 inches, total length 251 feet 6 inches. Lode 1½ foot wide, assaying 1 ounce 13 dwts. 1 grain of gold per ton. No. 1 rise above level risen 17 feet 6 inches, total height 43 feet 8 inches. Lode 1 foot wide, assaying 2 ounces 6 dwts. 12 grains of gold per ton. Winze below 840 south sunk 4 feet, total depth 16 feet 6 inches. Lode 1½ foot wide, assaying 1 ounce 13 dwts. 1 grain of gold per ton. This winze is being sunk to communicate with No. 2 rise in back of 740 north of Garland's shaft.—Carmichael's shaft. No sinking has been done, for we are still engaged cutting plat at the 101 feet level. The 640 feet level north of shaft has been driven 16 feet 6 inches, total length 16 feet 6 inches. No. 4 rise above 540 north risen 10 feet 6 inches, total height 67 feet 3 inches. Lode 2½ feet wide, assaying 15 dwts. 5 grains of gold per ton. No. 3 rise above level risen 7 feet, total height 105 feet 6 inches. This is suspended. The 440 feet level north of east crosscut has been driven 13 feet, total length 37 feet 6 inches. Lode 1 foot wide, assaying 16 dwts. 18 grains of gold per ton.—Love's shaft. The 615 feet level north of shaft has been driven 13 feet cut 5 fathoms 4 feet. Lode 3½ feet wide, assaying 1 ounce 15 dwts. 8 grains of gold per ton. Stope south of No. 2 west crosscut cut 8 fathoms 1 foot. Lode 6 feet wide, assaying 1 ounce 3 dwts. 1 grain of gold per ton. Stope below north level north of east crosscut at 340 south cut 18 fathoms 4 feet 3 inches. Lode 7 feet wide, assaying 1 ounce 8 dwts. 3 grains of gold per ton. Stope above 340 south of No. 1 south rise cut 7 fathoms 3 feet 3 inches. Lode 3½ feet wide, assaying 1 ounce 5 dwts, 17 grains of gold per ton. Stope north of south rise cut 7 fathoms. Lode 1½ foot wide, assaying 1 ounce 4 dwts. 8 grains of gold per ton. No. 1 stope above 240 north on fold cut 4 fathoms 8 inches. Lode 6 feet wide, assaying 2 dwts. 6 grains of gold per ton. No. 2 stope on fold cut 1 fathom 3 feet 6 inches. Lode 4 feet wide, assaying 1 ounce 13 dwts of gold per ton. No. 2 stope north of No. 3 rise above 240 south cut 10 fathoms 1 foot 6 inches. Lode 3 feet wide, assaying 1 ounce 8 dwts. 3 grains of gold per ton. No. 2 stope north of No. 1 rise cut 5 fathoms 5 feet. Lode 6 feet wide, assaying 1 ounce 2 dwts. 20 grains of gold per ton. No. 3 stope south of rise cut 9 fathoms 1 foot 3 inches. Lode 6 feet wide, assaying 1 ounce 10 dwts. 12 grains of gold per ton. Stope north of rise cut 5 fathoms 3 feet 6 inches. Lode 1½ foot wide, assaying 19 dwts. 2 grains of gold per ton. Stope on east part of lode above 240 south cut 7 fathoms 5 feet. Lode 2 feet wide, assaying 1 ounce 15 dwts. 23 grains of gold per ton. Stope below 240 north on fold cut 6 fathoms 3 feet 6 inches. Lode 4 feet wide, assaying 1 ounce 12 dwts. 16 grains of gold per ton.—Carmichael's shaft. Stope above 540 south of No. 1 north rise cut 8 fathoms 3 feet. Lode 3 feet wide, assaying 1 ounce 10 dwts. 21 grains of gold per ton. Stope north of No. 2 rise cut 1 fathom 3 feet 6 inches. Lode 3½ feet wide, assaying 1 ounce 8 dwts. 3 grains of gold per ton. Stope below 315 north of shaft cut 3 fathoms 5 feet. Lode 2½ feet wide, assaying 1 ounce 9 dwts, 2 grains of gold per ton. Stope above 315 south of south rise cut 8 fathoms 4 feet 6 inches. Lode 1½ foot wide, assaying 13 dwts. 1 grain of gold per ton. Stope north of rise cut 6 fathoms. Lode 3 feet wide, assaying 1 ounce 6 dwts. 12 grains of gold per ton. The above stoping is for March month.—Returns. During March month 4950 tons of quartz were stamped, which produced 6203 ounces of gold, 118 tons of tailings were treated, which produced 309 ounces of gold, making a total yield for the month of 6503 ounces.—New tailings. I am pleased to state that the 18 additional Wheeler pans, and nine settlers were started on the 6th instant, and are working satisfactorily.—Cyanide works. The masonry work of this is almost completed. We have commenced putting on the roof of buildings.—New mill. We are proceeding with the erection of the engine for this as fast as possible.

BRITISH BROKEN HILL PROPRIETARY.—Mine manager's report for the week ending March 18: Main workings. We mined the usual quantity of ore from the various faces in the far north stopes and eastern vein in southern part of mine, all of which was dumped on reserve piles on surface. The working faces look well, and are yielding ore of usual grade. We mined 82½ tons of lead carbonates from the stopes, assaying 45 per cent. lead and 5 ounces silver. —Howell shaft. We hoisted 155 tons carbonates, averaging 40 per cent. lead and 2 ounces silver per ton.—Surface: Erection of jig plant. Have begun placing the large engine on its foundation, and fair progress made in rivetting large circular tank. Masons are now building up foundations for circulating pumps at the bottom of shed, which work is well in hand. The top and incline tramways are about finished with the exception of laying the rails down, which will be proceeded with in a day or two.—Ore shipments. During the week we dispatched two trucks zinc sulphide ore for shipment to London weighing 10 tons 11 cwts. 2 qrs., which contained 2¼ tons zinc, 3 tons lead, and 174 ounces of silver. Have just agreed last lot of carbonates with Block 14 Company, Port Adelaide, from previous deliveries—viz., 54 tons (net) containing 6¼ tons lead and 1407 ounces silver. Weak'st assays vary from 30 to 35·5 per cent. lead, and from 1·3 to 16·8 ounces silver per ton carbonate ore.

DE LAMAR.—Report on mining and milling operations for the month ending March 31: Mining. Ore breaking department. Wilson vein above 3rd level average width of vein 4 feet, assaying $23·45 in gold and $2 in silver, equal to $25·45 per ton. Hamilton vein above 5th level average width of vein 5 feet 6 inches, assaying $14·95 in gold and $1·80 in silver, equal to $16·75 per ton. 77 feet vein above 4th level intermediate average width of vein 3 feet 6 inches, assaying $21·05 in gold and $0·92 in silver, equal to $21·97 per ton. 77 feet vein above 4th level west average width of vein 4 feet, assaying $17·40 in gold and $2·75 in silver, equal to $18·15 per ton. 77 feet vein above 5th level average width of vein 3 feet 6 inches, assaying $17·95 in gold and $2·15 in silver, equal to $20·10 per ton. 77 feet vein above 7th level average width of vein 3 feet, assaying $14·85 in gold and $1·35 in silver, equal to $16·20 per ton. 77 feet vein above 8th level average width of vein 4 feet 3 inches, assaying $9·67 in gold and $11·90 in silver, equal to $21·57 per ton. 77 feet vein above 9th level average width of vein 4 feet 2 inches, assaying $14·20 in gold and $11·55 in silver, equal to $25·75 per ton. 77 feet vein above 10th level average width of vein 2 feet 3 inches, assaying $14 in gold and $4·27 in silver, equal to $18·27 per ton. No. 5 vein above 4th level average width of vein 1 foot 6 inches, assaying $22 in gold and $0·40 in silver, equal to $22·40 per ton. The vein in this became too narrow and is now suspended. No. 5 vein above 5th level average width of vein 4 feet, assaying $19·10 in gold and $0·94 in silver, equal to $20·04 per ton. No. 5 vein above 6th level average width of vein 2 feet 9 inches, assaying $17·95 in gold and $1·35 in silver, equal to $19·30 per ton. No. 5 vein above 10th level average width of vein 2 feet, assaying $16·50 in gold and $2·09 in silver, equal to $18·59 per ton. No. 7 vein above 7th level average width of vein 2 feet 9 inches, assaying $16·70 in gold and $0·81 in silver, equal to $17·51 per ton. No. 9 vein above 7th level average width of vein 3 feet, assaying $19·40 in gold and $1 in silver, equal to $20·40 per ton. No. 9 vein above 8th level average width of vein 2 feet 4 inches, assaying $18 in gold and $1·50 in silver, equal to $19·50 per ton.—Prospecting department. Hamilton vein 8th level east advanced for the month 21 feet 6 inches. It has been driven on the contact between the dyke and porphyry and produced a little shipping ore. It is now suspended. Hamilton vein 8th level west advanced for the month 45 feet. The average width of the vein has been 2 feet 6 inches, assaying $11·20 in gold and $6·33 in silver, equal to $17·53 per ton. During a portion of the month the vein became narrow and impoverished, but opened and improved again. At the present writing its value is $24 per ton, all told. 77 feet vein operations 4th level west. The connections having been made between the 4th and 5th levels, as reported in my last, no other exploratory work has been done. A stope has been commenced from the roof of No. 5 level.—77 feet vein. Operations at 9th level advanced for the month 24 feet; it was then suspended and a raise commenced towards the 8th level, on a vein which we have reason to think is the Hamilton vein. It shows a value of $12 to $13 per ton, nearly all gold. As it goes upwards it will doubtless improve. No. 9 vein 7th level west advanced for the month 29 feet. Average width of the vein 3 feet 6 inches, average assay value $20 in gold and $1 silver, equal to $21 per ton.—No. 10 vein above 8th level. This level has been extended on the vein during the month 47 feet. It has produced an appreciable quantity of good milling ore and a quantity of shipping ore.—New vein south No. 5 4th level. The level has been advanced east 20 feet 6 inches. This vein showed good ore in places. The work was suspended and the crosscut extended south for a distance of 22 feet and another vein entered. This vein is of good promise, being 4 feet wide, and assaying $20 per ton, chiefly gold.—Miscellaneous crosscutting. A crosscut south from the No. 9 vein 7th level has been driven 53 feet for the purpose of intersecting any veins or branches coming from the 4th level.—Milling department. Table of work performed for the month of March. Number of tons crushed (wet) 4029·57, number of tons crushed (dry) 3625·52.—Assay value of the pulp, Gold $14·86, silver $5·82, equal to $20·54.—Assay value of the tailings. Gold $4·11, silver $1·08, equal to $5·19, percentage saved, total 74·73 per cent. Number of Doré bars produced 70, number of ounces pure gold produced 2092·1505, number of ounces fine silver produced 34,379·48, value of gold produced $41,863·01, value of silver produced $20,627·69, surplus on sales of bullion $3,151·36, ashes, slag, matte, clean up pan residues $4647·37, ore sales $1156·91, concentrates $1617·07, miscellaneous revenue $393·62, total $78,257·03, deduct all expenses for the month $43,063·82. Estimated profit for month (or at $4·90 to £ sterling, £7201), $35,293·21.—Pelatan-Clerici process. A part of the plant was started up about the middle of last month. It was found necessary, however, to make certain changes in the mechanical appliances, and to do this we were obliged to send to the foundry. These changes have retarded our operations.—Pelton wheel. On March 20 the water was turned into the wheel, and, after doing duty for a few days as an auxiliary to the steam engine, assumed the duty of driving all the mill machinery, and is now working continuously and satisfactorily. Every department is in efficient working order. —John W. Plummer, manager.—De Lamar, Idaho, U.S.A., April 8.

DON PEDRO.—Mine manager's monthly report April 1: During the past month operations have been carried on satisfactorily, considering the wet nature of the formation, and the mineral extracted from the south ing round has been of a high standard. No. 1 stope in the southern extremity of No. 6 shoot has been worked steadily throughout the month, but progress has been slow owing to the saturated condition of the lode, which has become larger than hitherto, and is of rich quality. Stoped for the month 1 fathom 2 feet.—No. 2 stops. This joins No. 1 on the north. Here but little water was encountered in the early part of the month, but in the later half-month this stope also has become very wet. The lode is very large, and in the last cut has improved in quality. Stoped for the month 1 fathom.—70 fathom crosscut. Since the Cannon shoot was reached very slow progress has been made. On the south side of the crosscut the ground is somewhat hard, but towards the north, the formation being very soft as well as very wet, makes progress almost impossible; therefore, I intend if better progress is not made in the course of a day or two to suspend operations at this place until drained.—Produce for the month, 540 tons gave 2139 ozs., equal 2½ ounces.

EAGLEHAWK CONSOLIDATED.—The following fortnightly report has been received from the mine, dated Maldon, March 18:—In placing before you my fortnightly report I beg to state that the shaft has been sunk a further depth of 30 feet, total from the plat 96 feet, or 1096 from the surface. The strata that we have passed through is hard sandstone rock underlying to the east with an occasional slip coming in from the east. After sinking another 30 feet I would recommend to cut a plat 100 feet from the present one, and timber the 100 feet that will be then sunk.

ECLIPSE.—The following is an extract from the manager's monthly report: Development work having proved the course and dip of the lode from the prospect of No. 2 shaft and the crosscuts, a site has been selected for sinking the No. 2 main shaft. Prospect work on the north-west portion of the property has disclosed an ironstone formation, from which, at the bottom of the small shaft sunk thereon (14 feet), samples are reported to give fair prospects of gold. At the middle of March the report was that the main shaft was down a depth of 114 feet, and it was expected that the water level would be soon reached; that the No. 2 main shaft was down 22 feet, and that the ironstone lode stuff continued about as previously reported, prospects showing traces of gold.

LOMBARDY GOLD MINE.—The following is the report of the mine manager dated Murchison, West Australia, March 16: As requested I have inspected the above mine. No. 1 shaft is now to a depth of 70 feet vertical, where it intersected the lode which is 4 feet wide showing gold throughout. There is no other work done at this point. North of No. 1 shaft is No. 2 shaft which is sunk to a depth of 40 feet. At this point there are two levels driven on the strike of the lode 25 feet south and through to No. 1 shaft north. There the lode varies in size from 3 feet 6 inches down to 6 inches in the smaller part, being at the communication of No. 2 shaft, the level being 3 feet in the footwall. At this point a splice is distinctly shown in the lode, as No. 2 shaft is sunk in the hanging wall part and to a depth of 45 feet, showing quartz 3 feet wide. At the bottom of this shaft there is a level driven 9 feet, quartz 3 feet wide. North of No. 2 shaft is No. 4 shaft sunk about 12 feet, the lode showing its continuation from No. 1 shaft to No. 4. The lode varies in size from 4 feet to 6 inches, with well defined walls and showing gold throughout. I have every reason to believe this to be a true lode and as depth is attained will become much richer. I think Mr Skertchley (the company's local consulting engineer) has taken the right step in sinking a vertical shaft, as the ground is easy and stands without timber, whereas to sink on the lode it would require timber, which is very costly here and would make it much more expensive for working. This shaft is expected to cut the lode at 150 feet deep, it is now down 66 feet. There is another shaft sunk to the depth of 63 feet, this shaft is for water, it is in easy ground. At present there is no water in the mine. —J. W. Keast.

MENZIES CRUSOE.—The following information is to hand from the company's manager, under date, Menzies, March 21: Robinson Crusoe. E shaft. Total depth of winze from north level 103 feet. Man started to crosscut to hanging wall at bottom of winze to prove thickness of lode. Stone looks well, and is nicely mineralised. Assay of stone 2 ounces 19 dwts. 14 grains of gold, and 1 ounce 19 dwts. of silver per ton.—H shaft. Underlie, total depth 31 feet. Reef 4 to 8 inches, 2 ounces stone. Everything working satisfactorily.

MOUNT LYELL.—Engineer in charge of mine reports for week ending March 20: No. 1 tunnel north drive. The face has been driven 3 feet for the week, total 12 feet.—No. 3 tunnel south drive. Distance driven for the week 2 feet, total 559 feet, face hard.—No. 4 tunnel south drive. Distance driven for week 5 feet, total 470 feet.—No. 4 tunnel south drive No. 3 crosscut. Distance driven for week 3 feet, total 25 feet.—No. 4 tunnel south drive No. 2 rise. Rise put up for the week 4 feet, total 4 feet, in high grade ore which is breaking well.—No. 4 tunnel south drive No. 4 crosscut. Face extended 2 feet in hard pyrites, total 10 feet.—No. 4 tunnel south drive No. 3 rise. Rise put up 1 foot in high grade copper ore, total 1 foot.—Surface work. Compressor site. Siding from haulage line to machinery site has been put in. Brickwork for compressor bed completed. Rivetting up of air receiver completed. Erection of store, blacksmiths shop, &c., making fair progress. Boiler for air compressor brought over haulage line and delivered to-day.—No. 2 bench. Clearing away spoil from old quarry and stripping of over burden has been carried on during the week, and a good face is being formed in the pyrites body. The ore is of good quality and continues to break well. A small vein for self-acting incline is being prospected.—Progress report for week ending March 20: Haulage line. Large boiler for air compressor plant successfully taken from machinery site to place at mine over the line, framing ore bins.—Smelter building. Erecting hot-air main, various water service piping in progress, fire service line from high-pressure reservoir relaid.—Crusher building. Floor of sampling room in progress, both flux and ore crusher now in place on frames, erecting trestles of crusher siding from through tram.—Blast furnaces. Brick lining of bustle pipes finished, hanging water pipes, &c. —Hot blast stoves. Connections with blowers about completed, mounting hot-air main and connections of same with stoves finished.—Converter department. Hill flue in progress.—Flux quarries. Plate laying of extensions of lime kiln siding into both about finished, operating in lime quarry, stripping silica quarry in progress.—Laboratory. Building in course of erection. Weather turning bad.—Railway superintending engineer reports week ending March 21: Contract No. 24. The whole of the earthworks are now complete to 40 chains in Nail's Creek, and from that point to Lynchford about a further mile of formation is complete, and the balance is in a forward state. All culverts are in position completed, and only four bridges remain to complete to the 15 mile, which will be completed by the end of April, and well ahead of the plate laying. From Lynchford to the crossing the earthworks and two bridges are complete, and the remaining bridges will be finished in a fortnight.

NEW QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers, March 14: No. 4 south level (footwall). Stoping has been continued both over and under this level, the reef being very irregular, varying from a leader to 6 inches, the stone being rather white.—No. 2 formation. The drive from the straight shaft is now showing 6 inches of stone. The stopes over this level there is scarcely any stone at present. Stoping has also been carried on on both sides of the winze. The ground being hard reef varying from 1 to 5 inches.—No. 4 formation, No. 3 north level. Stoping is being continued over this level, the reef in this stope does not look so well as in my last report. There is a large amount of blank ground, the reef being very bunchy varying to 1 foot in thickness.—Straight shaft. The work of opening out on the No. 5 formation is being pushed ahead as vigorously as is possible. Sufficient ground has been taken out to admit of putting in the opening out set. This has been fixed in position. The well from the formation to the bottom of straight shaft has been skidded, and to-day we commenced to put in the skids between the No. 4 formation and the No. 5 formation. A distance of 276 feet requires to be done, which work will be completed early in the beginning of the week. When this is done work of opening up No. 5 formation will be got on with all possible speed.—Quantity of quartz raised during fortnight. No. 4 south level footwall 156 trucks, No. 2 formation 61 trucks, No. 4 formation 140 trucks, total 360 trucks.

PAHANG CORPORATION.—Jeram Batang, report for February: Adit level. The western drive was advanced 15 feet, total from the crosscut 454 feet. The country passed through was a black slate. I put a parcel of 34 tons of stone (which was taken from this drive during the month of January) through the battery, and it averaged 4 per cent. black tin. There has been a great improvement during the last week, and the lode in the face at present will average 3½ feet of ore, and is worth from 6 to 7 per cent. in quality. This is the same chute of ore we are working on west in the No. 1 above. The stopes over the back of the drive east are turning out ore of a 6 per cent. quality. There has been a little improvement in the quality of the lode during the month. The contractors have broken 33¼ cubic fathoms of ore.—Winze. A chamber was cut out and a winze was started on the eastern chute of ore. This is now down 9 feet, and will be known in future as A winze. We are only taking a portion of the lode down in the winze, and this is carrying ore of 5 to 6 per cent. quality.—No. 1 above adit. The crosscut was cleaned out and driven a further distance of 6 feet, after driving about 4 feet we cut good tin. At present we have passed through 2½ feet of lodestuff, and are not yet through the lode. The lode is worth about 8 per cent. quality. I will be able to tell you more about this in my next report. The lode in the stopes over the drive east will average 9 feet in thickness, and the quality is worth 4½ per cent. The contractors have broken 25½ cubic fathoms of ore during the month. The stopes western chute of ore have turned out 13 cubic fathoms of ore, and is worth 6 to 7 per cent. black tin. The lode will average 8 feet in the stopes, and is very hard for breaking as it does not shoot well.—No. 2 above adit. The drive west was advanced another 24 feet, total from the crosscut 479 feet. The lode will average 4 feet, and is worth from 3 to 4 per cent. in quality. The country passed through was a grey slate charged with mica.—Shaft. This was sunk to a depth of 71 feet, and at 70 we started to open up and crosscut for the reef. As soon as the crosscut gets away from the shaft we shall start to reniae. The country passed through was the same as last reported. The water keeps much the same. 324 tons of stone were crushed during the month for a return of 40 tons of black oxide.—Report for February, Pollock's. Towards the latter end of the month the lowest drive in this mine was unwatered, the necessary repairs effected the pump chocks, and driving restarted in the No. 2 and 3 levels. The pump working half time is easily able to keep the mine dry. From the old stopes over the No. 1 level 57 tons of ore assaying 8 to 10 per cent. were sent to the battery, also 50 tons from B winze, assaying 8 per cent. The lode here in the west end is 4 feet wide. On the surface good headway is being made with the necessary excavation and foundation work for the new pumping engine for this mine.—Campbell's. Drive west on the lode was advanced 23 feet, total from crosscut 42 feet. Lode small but good hanging-wall, carries copper and blende, but no tin at present. Ground hard.—Nicholson's. The crosscut from Bell's lode was advanced 17 feet, total 432 feet. Lode formation 2 feet wide, was intersected by crosscut, which being of promising appearance later on will probably be prospected for a few feet east and west. No. 1 drive east on lode was advanced 8 feet, total 79 feet. In the face the lode is 3 feet wide, and improving. The overhand stopes during the month gave 224 tons of ore assaying 3¼ per cent.—Williams. No. 2 section. Drive east was extended 14 feet, total from crosscut 132 feet. The lode here having cut out, I started crosscutting north 88 feet from end of drive, and in 8 feet cut a lode 2 feet wide of good appearance. I am also crosscutting south at the same point to pick up a rich vein 8 feet wide met with some little distance further back west. From the overhand stopes 177 tons of ore were won arriving 4½ per cent.—Tescues. Adit. Drive east was advanced 20 feet, total from crosscut 73 feet, lode full width of drive. West was driven 45 feet, total from crosscut 122 feet, lode 2 feet wide. In the eastern stopes the lode is from 5 to 10 feet wide, and in the western 2 to 6 feet, and from these stopes 266 tons were won, assaying 2¾ per cent. A winze will shortly be started from the floor of this level vertically under the air shaft from surface, which it is intended to sink 100 feet, to prove this lode in depth before fixing on a site for a deep shaft. Chinese New Year holidays somewhat interfered with the mining work and accounts for the comparatively small amount done during the month.—D. W. Jones.

WEST AUSTRALIAN VENTURE.—The following is a fortnightly report on properties owned by the West Australian Venture Group:—Cremins Consols (Hannan's). The Victoria shaft, in which four men are now working, has been further deepened during the past fortnight 13 feet 6 inches, making a total from brace of 36 feet. In the early part of the month we struck a very fine looking formation, which induced me to go deeper before crosscutting than I intended to do when I wrote last week. The shaft has now passed through this formation, consequently the men have now commenced driving west to intersect the lode, which in my opinion passed out of the shaft some considerable distance up.—Good Luck (Hannan's). Four men are still employed in sinking the vertical shaft, which has been further deepened during the fortnight 22 feet 6 inches, making a total from brace of 67 feet. In the course of a few days crosscutting will also be commenced due east to intersect the lode showing at surface in that direction.—Normandy (Ora). No. 11 shaft. Drive now in 38 feet. Reef continues 4 feet 6 inches, and carrying also gold on both foot and hanging walls. Winze now down 25 feet. Stone in face about 3 feet, and better than anything previously raised, and estimate that this stone will make the paddock average about 3 ounces. Some 50 tons at grass.

OMEO.—The following is from the report of Mr. Cardiss, the mine manager:—Report of work done on the mine. Cross country tunnel into western reef 163 feet, the reef which at this point is 6 feet wide carrying gold; drive on western reef is 135 feet north from opening of tunnel, lode from 6 to 7 feet wide along its entire length giving 130 feet of backs; country passed through mica, schists and sandstone, crosscut is from western reef 53 feet to cut the Lena line, which will give about 300 feet of backs, expect to strike something good in crosscut, face of crosscut very wet, country schist with seams of mineral. Tunnel in on Lena reef 75 feet fair gold under foot all along the tunnel. Lode in face 3 feet wide, getting better in gold. Tunnel in on Lillie Rae 26 feet, backs 45 feet. Lode in face 4 feet wide, carrying gold. Winze sunk in face of tunnel 14 feet. Lode in bottom 4 feet wide, gold improving at the bottom of winze. Intend pushing the crosscut on and driving north and south on western reef before stoping any. Driving on the Lena reef another 200 feet, and sinking the winze on the little crosscut 30 feet. I expect to have a crushing in a few weeks.

AURORA WEST UNITED.—The Johannesburg Consolidated Investment Company announce receipt of a report from the above company containing the following:—For the month of March 274 feet were developed; 421 tons of reef were hauled, making 8851 tons of ore at grass. South reef is now being opened up on third level both east and west. On the east side this reef runs about 7 or 8 inches thick, and on the west side 3 feet. I have every reason to believe assays will be very good judging from the pannings I have seen.—Fourth level. During April we expect to strike the south reef in this level. Main reef leader assays well. Our machinery and pumps are in good working order.

ALAMILLOS.—Mine report dated April 22: In the 70 fathom level driving east of Sanz' winze the lode is well defined, but of no value at present. The lode in the 40 east of Santa Agueda shaft has fallen off in value to ½ ton per fathom. In the 85 west of Taylor's engine shaft the lode continues unproductive. No improvement has taken place in the 160 west of the same shaft. In the 100 east of Judd's engine shaft the lode continues to turn out well, and is valued at 4 tons per fathom. Herman's winze, sinking below the 60 fathom level, the lode produces stones of lead, and is estimated at ½ ton per fathom. Marques winze, below the 100, the lode at present is small and unproductive. Diaz' rise above the 100 fathom level, the lode is producing less lead, and is valued at 3 tons per fathom.

BALMORAL MAIN REEF.—The Johannesberg Consolidated Investment Company announce receipt of a report from the above company, containing the following:—West shaft. Good progress is being made with the cutting down and timbering of this shaft.—East shaft. Ground has been taken out for stations at both first and second levels, and at first level bearers for ore bins have been put in. The foundations for head gear and crushing station at east shaft have been completed, and the erection of head gear is making good progress. Good progress is also being made with all surface works. There is a sufficiency of native labour.

BARNATO CONSOLIDATED.—The Johannesburg Consolidated Investment Company announce receipt of a report from the above company to the effect that a seam of coal 3 feet 6 inches thick has been struck on the property Cypherfontein (Heidelberg) at a depth of 66 feet, and that the drill is again in sandstone, which indicates the probability of another seam being struck below. Work is proceeding satisfactorily on Hangfontein and Rietfontein.

BIG BLOW.—In response to numerous enquiries from shareholders, the secretary notifies that the directors have instructed Mr. Vivian to clean up as soon as he has completed crushing 200 tons, and this may be expected about the middle of May.

CLYDESDALE (TRANSVAAL) COLLIERIES.—Extract from the manager's report for the week ending March 28, and letter dated April 2:—No. 1 drive has been driven 28 feet, total distance 100 feet. No. 2 drive has been driven 24 feet, total distance 85 feet. No. 3 drive has been driven 12 feet, total distance 49 feet. No. 5 drive has been driven 30 feet, total distance 119 feet. No. 7 drive has been driven 13 feet, total distance 63 feet. No. 8 drive has been driven 21 feet, total distance 49 feet. Two new drives not numbered 3 feet each, total distance 6 feet. Total cutting for the week 134 feet. Our boys are gradually getting better at undercutting the coal. The railway contractors are making good progress. They expect to be finished in 18 or 20 days. I see that we will require to ballast under the sleepers, for the heavy rains are making the ground very soft. We can only add that everything is going on as well as we could wish.

FORTUNA.—Mine report dated April 22: Canada Incosa Mine. In the 110 fathom level driving west of San Pedros shaft the lode has slightly declined in value, and is now estimated at ½ ton per fathom.—Los Salidos Mine. The lode in the 212 fathom level east of Taylor's engine shaft has very much improved since last reported, and is now valued at 2 tons per fathom. The driving of the 200 east of the same shaft is suspended for the present, and the men are crosscutting south to see if there is any more lode. The 92 west of Palgrave's shaft continues hard for driving. Santo's winze below the 200 fathom level is going down in a lode worth 1½ tons per fathom.

HAURAKI ASSOCIATED GOLD REEFS.—The Auckland *Star* says: The prospects of this company's mine continue of a most excellent character, and it would be no very great surprise to hear of an important find any day. Work is at present being carried on in the intermediate level, which is in a total distance of over 300 feet. The drive on the Rainbow end leader has been advanced 12 feet past the winze during the week. The leader runs from 6 inches to 8 inches in thickness, and the stone in appearance is all that could be desired for gold. It was at this point that the 12 lbs. of picked stone were obtained when breaking down yesterday, and colours of gold were left in the face. The encasing country is tight, a good indication in this locality, and carries splendid mineral seams and little quartz stringers. The winze sunk on this reef some time back had to be discontinued on account of the influx of water. The object in sinking here was to effect communication with the low level, but owing to the water in the winze, a rise will have to be put in from the low level to effect the necessary connection, and which, when completed, will throw open a fine block of ground ready for stoping. The footwall lead from which the specimens were bagged on Wednesday still maintains its promising appearance, and appears to be developing in size in the drive, being now fully 9 inches in thickness, while at every breaking down a few pounds of stone are saved. The winze on this lead is down 36 feet, and carries gold all the way, and the manager expects in another 50 feet of sinking to hole through to the crosscut, now in 28 feet off the low level, which should be up under the winze in another 8 or 10 feet of driving. The footwall leader in the winze is at present about 4 inches in thickness, in fine mineral country, and the quartz composing the leader is most kindly in appearance. Although at present it may be small it may develop in size at any minute, more especially the farther down it is followed. An example of this kind may be seen in the Rainbow end reef, which in the intermediate level varies from 6 to 8 inches, but in the low level runs from 1 to 2 feet in thickness. Taken altogether, this is one of the most promising mines on the Tokatea range, and with plenty of capital to extend operations, and thoroughly prospect the lower levels, there is no reason why it should not be one of the regular gold producers of the Coromandel district.

HIT OR MISS PROPRIETARY.—Since the date of the last report the development of the company's property has been actively pushed on, and the advices received continue to indicate the richness of the ore opened up. On lease No. 725, in shaft No. 12, the manager cabled on 21st inst., that he had come upon a very rich chute of gold, and he characterised it as being a very important discovery, and further, that 25 bags of rich specimens had been stored in the strong room. On lease 760, the lode has opened up to a width of 5 feet, and assays 3 ounces per ton. The delay anticipated in getting the machinery forwarded has been overcome. The directors instructed their agent at Coolgardie to proceed to Perth in order to press on the despatch of the company's machinery, and a cable has been received from him dated 23rd instant, which reads as follows:—"Have obtained all machinery landed, and sent off by rail to Coolgardie. Do not think there will be any further delay." Mr. Archibald, our consulting engineer, advises the board that it will take four weeks to erect the battery, after delivery of the machinery on the ground, which should be the end of this week, so that crushing operations may, therefore, be expected to commence in a few weeks. An abundance of ore is in readiness, and the water supply is now over 18,000 gallons per day. When this mill is fairly started, a suitable site will be selected for the second plant, already purchased, to be delivered in May, and no time will be lost in developing another block of the company's property, so that a second mine may be started in working order as speedily as possible.

HOME COAL ESTATES.—Manager's report dated February 27, and extract from letter dated March 5: No. 1 pit. The work in this pit is going on in very much the same way as when writing you last. The coal going to east is all first-class bright coal, and also to the south the coal is very good. I am preparing to put in a double road laid in the bottom to allow of a much quicker way of sending up coal. The second row of cage slides has been put in, and the double cage and rope also put on, but we are not drawing coal with the new cage yet on account of the double road in pit bottom not being finished. The development is still being pushed on.—No. 2 pit. The coal on east side of the pit is still dull, and in the meantime I have stopped the driving of the level, being short of boys. I have put them on to drive the level on the west side, where we cut through the fault and get the bright, so that we are opening out in places in the good coal. We have a lot of places now ready in the bright coal to start if we had plenty of boys.—Coke ovens. These are now complete and ready for being heated up, which will be done next week.—Brickwork. The engine is in position, also clay grinder all ready for making fireclay and brick when wheel and pug mill come. Mr. Goldberg returned from the mine a few days ago, and reports everything going on better than has been the case up till now, and he seems highly pleased with the progress that is being made. We have entered into negotiations for 50 native labourers from Port Elizabeth, and of these 28 are now on the road to the mine.

LANGLAAGTE ROYAL. — The Johannesburg Consolidated Investment Company announce the receipt of a report from the above company containing the following:—For the nine days ending March 31, 376 feet were developed, equal to 7520 tons of ore, making a total of 1213 feet for the month of March. There are now 184,060 tons of ore developed, and there are 14,434 tons placed to reserve. The native labour supply is being increased, and in the course of next week I hope crushing operations will be recommenced.

LINARES LEAD.—Mine report dated April 22:—Poso Ancho Mine.—Warne's crosscut. In the 200 fathom level driving east the lode is large and contains some spots of ore. The lode in the 200 west is large and open, and lets out water freely. In the 178 west the lode is large and turns out good stones of ore, estimated at 1 ton per fathom. In the 200 west of Peill's engine shaft the lode is regular and well formed and looks promising, valued at ½ ton per fathom. No. 279 winze sinking below the 155 fathom level the lode is wide and open, and is fairly productive, being at present worth 1 ton per fathom.—Los Quinientos Mine. Taylor's engine shaft. In the 200 fathom crosscut driving south we have passed through two or three small branches in the past week, but the main part of the lode is farther south. The lode in the 185 fathom level east is more regular and better formed than it has been for some time, and is valued at ½ ton per fathom. The 165 east continues of good appearance, and is opening ground of fair value. The lode is estimated at 1 ton per fathom. In the 150 east the lode is looking more promising, but does not contain ore enough to value.

LOMBARDY.—Manager reports for week ended March 14: Main shaft has been sunk to a total depth of 66 feet. At 60 feet a strong leader dipping towards main lode was cut. Water shaft has been sunk to a total of 70 feet. Ground good for progress. The contractors are bringing in firewood every day, and there are now about 70 cords already stacked.

McKENZIE GOLD.—The undermentioned report, which has been received from the company's consulting engineer, Mr. Frank Nicolas, M.I.M.E.:—McKenzie, Glenloth, March 22. I have the honour to report that the No. 1 and No. 2 stopes are being pushed on with all possible dispatch, and that the ore is of excellent quality, with rich shoots of very rich stone. Some parts, mostly those between the prospector's and No. 2 shafts, are only ounce ore, but you might rely on the average milling value as 3½ ounces to the ton. The plat in the main shaft is progressing favourably, considering the extraordinarily hard nature of the rock, and I am advertising to let contracts for drives north and south along the reef. In the south end of the plat the reef has opened out to a width of 2½ feet, and is of an estimated value of 2½ ounces to the ton. In the north end the reef is 1¾ feet wide, and will mill 2 ounces per ton. I have started driving along the rich shoot of gold lately reported in the No. 2 shaft, and we are raising some splendid stone.—Frank Nicolas.

MOUNT ZEEHAN (Tasmania) SILVER-LEAD. — Manager reports for week ending March 17: Silver Queen section, No. 8 lode, No. 2 level. Winze on south-west part of lode has been sunk 9 feet, total 38 feet. Ore raised, 2 tons of firsts, and 2 tons of seconds. The ore appears to be of a better quality than any previous lot. Concentrator has been running on ore from Zeehan-Montana Company.—Tributes. Argent No. 2 have a fairly good lode at their 50 feet level.—Balstrups. The week's sales from this tribute amount to £215.

NEW HEIDELBURG ROODEPOORT.—The Johannesburg Consolidated Investment Company announce receipt of a report from the above company, containing the following:—For week ending April 4 87 feet were developed.—Main shaft. Bottom still remains in settled country, with solid and well defined reef highly charged with pyrites. On 600 feet level we have struck the reef, having just reached the hanging wall; it looks and pans fairly well.—Cyanide works. Foundations of cyanide works are being surveyed and levels taken in readiness for excavating next week.

NIEKERK (Kierksdorp).—Extracts from the manager's report for March: As was prognosticated, we have been able to accomplish more work this month than previously. . . . No. 1 winze has been sunk a further 24 feet, and is now down 94 feet. . . . The crosscut north at the 80 feet level has been continued a further 44 feet, and is now in a total of 94 feet. . . . The drift east upon the lode at the 70 feet level has been driven a further 31 feet, and is now a total of 56 feet. . . . At surface five pairs of 15 feet rails have been laid, the total length of our tram line at this shaft being now 200 feet. . . . No. 2 winze has been sunk a further 25 feet, the reef now apparently being inclined to take a less dip; its width of 3 feet 6 inches has been maintained, as also is the value of the ore. Drifts are being commenced both to the east and west to connect with the drift from the 70 feet level at No. 1 winze and with No. 3 winze. . . . Plans are under consideration for the erection of a small headgear and whim to be constructed during this next month, and the excavations for the foundations are being made. The self tipping skips have been ordered and two mules bought for motive power. No. 3 winze is now being commenced at a distance of 375 feet east of No. 2 winze, with the object of getting beneath the workings. . . . We trust, after we put on night and day shifts, to be able to reach the second level—viz., 170 feet—about the same time as the other winzes, notwithstanding their advanced stage. The manager concludes by stating that the result of the 26 working days can be looked upon in no light than very excellent work; that great credit is due to the mine captain, Mr. E. Wardrop, for the way in which he both works and supervises the general work; that the mine staff has been increased, and the health of the camp is all that could be desired.

RANDT GOLD.—The following is an extract of letter received by the local board of the Randt Gold Mining Company (Limited), Johannesburg, dated March 30: On Wednesday last, Mr. Way (manager of the George Goch Gold Mining Company) accompanied Mr. Wismand and myself to the mine, and the former examined carefully our workings, and the surrounding ground. He approved the continuation of three of the winzes to the south of the property—that is the most southerly of those already opened—down to 150 feet, whereafter they are to be connected by drives. These winzes show at present depth richer ore than those opened at the extreme north of the ontcrop. You will be glad to hear that the samples taken by Mr. Way, from these richer winzes assay very satisfactorily (20 dwts.), notwithstanding they were rigorously fair, and something on the other side, so that they would represent the average contents of the entire roof in ordinary milling operations. We are all very pleased that we have so good ore so early in the sinking.

ROODEPOORT.—The Johannesburg Consolidated Investment Company announce receipt of a report from the above company containing the following: During the month of March 398 feet have been developed. Considerable work has been done in the lower levels as it is important to get connected up with the new incline shaft without delay. The upper levels have also been extended, and new winzes and rises made, the whole forming part of my plans for a constant and regular supply of ore. During the month the reefs in the drives have not shown much change, and the general formation has been maintained throughout with fairly good pannings.—New head gear. Most of the work on this portion of the new construction works is completed: sorting table and skips have only now to be put in to complete this portion of the work.—Air compressor. This is running well and doing good work. I am hurrying up the contractors and my own workmen to get everything ready to start the mill by May 1 if possible.

WAIHI SILVERTON EXTENDED.—The Chairman of the local board writes on March 19 as follows: The machinery on the surface has been so often described that I need only add that it was in the same state of excellent efficiency as when first erected, and that the passage up and down the shaft is exceptionally silent. In the mine I found the work on the Silverton lode in progress at each end of the main adit. That to the north-west being in excellent country, the lode looking well and increasing in size. This, our manager has since advised us, has materially improved, and it is by no means improbable that we may be coming up to the junction of the Rosemont and Union lodes from the Waihi Company's property, which we believe are still ahead, and must certainly junction with our Silverton lode. In the south east end a drive is being carried across the lode to the south, there being here a large body of rich ore, in which I saw gold in several places from stone I broke out of the face and carried with me to the surface. On the No. 3 lode no extension is being made on the north end, as the whole reef is being taken out from the crosscut with a view to opening it up for stoping. The rises to the surface were well advanced, one being through, and the other nearly so; the ore, the whole distance, being good payable dirt. The winze going down on this lode was down 36 feet, and we are now advised by our manager is sunk 49 feet from the drive. The whole of this distance it has been sunk on the footwall and has carried good payable ore from the drive, thus showing that for 150 feet from the surface this lode is highly payable. This is the lowest depth reached in our mine, and shows that even to this point alone we have years of work for our battery. The Christmas Box lode has not been extended, nor is it deemed advisable to do more on it until the battery is started. I next proceeded to the No. 2 shaft, and found crosscuts being extended in both directions with nodules of good quartz coming to hand, but the reef has not yet been intersected. The country is all that could be desired, and I am sure we shall be able to advise soon something of value from this point.—The consulting engineer, Captain W. H. Argall, reports on March 20 as follows:—On the 3rd inst., I visited your company's property, and with your manager, Mr. Adams, inspected the whole of the mine.—Mine. Steady progress has been made in both the Silverton and No. 3 lodes. The Silverton has been extended on the western end to 160 feet from the shaft crosscut. At this point the lode is a fine compact one showing excellent ore, which will yield a good paying value in the battery. On the eastern end after junctioning with the No. 3 and Christmas Box lodes a very considerable body of ore is striking in a southerly direction, and your manager is following this with a view to determine its course and value. There can be no question that there is here a very large amount of high-grade ore in sight, but until further exploration it will be impossible to say to what extent. On the No. 3 lode the work of rearing two rises was nearly completed, one having already holed through to the surface. The winze being sunk on this lode was already carried to a depth of 35 feet, the difficulty of contending with the water not being so great as might have been anticipated. The winze has been carried down on the footwall of the lode, and throughout the whole distance has proved good payable ore. The importance of this fact can hardly be overestimated as showing the solid and equable character of the lode, and the larger reserves of good milling ore awaiting reduction.—Battery. At the battery matters are well advanced, the only work of importance impeding the start being the connections for the low-pressure turbine, which were expected up the following week, and should make the whole work complete when fitted. The plant is in every way a most permanent and substantial erection, and your manager deserves the highest credit for designing and erecting so complete a battery. The tramway is finished between the mine and battery, and the locomotive running between the two is fully equal to the task required of it, and runs smoothly and quickly the whole distance. I am very sorry that owing to the exceptionally dry weather of late the supply of water has fallen off very considerably. Even if we could have started the battery the water power would not have been sufficient to drive the whole of the plant. This is very unfortunate, but, of course, cannot be helped. We expect rain daily.

FREDERICK THE GREAT GOLD AND RECOVERY.—Fortnightly report, Bendigo, March 23: We have the honour to report to you the following progress in your mine during the past fortnight. The level south at No. 5 or 680 feet from the surface has been driven and timbered a further distance of 31 feet, total south of main cross cut 464 feet. There is a large body of stone on the east side of this level. The level south at No. 6 or 780 feet from the surface has been driven and timbered a further distance of 32 feet, total south from main crosscut 397 feet. There is still a large body of stone in this level with a heavy flow of water making. The winze from the 580 feet level which was mentioned in last report has been cleaned out and found to be 21 feet, and there is a crosscut at the bottom of this winze which has been driven east 15 feet all in solid quartz and has not reached the eastern wall. On the 10th inst. we started to sink this winze and have sunk it to a farther depth of 6 feet, total 27 feet, all in quartz of a very nice appearance, heavily charged with mundic and galena, and showing several specks of free gold, and a cable was sent you on 20th inst. as follows:—"Specks of visible free gold, winze from 580 level; it will be seen upon the plan sent," meaning the tracing forwarded to you on February 10, on which this winze is shown.

GRAVEL GOLD.—March 21: Run No. 15. As mentioned in my last report, this run was commenced on the Mentira bank, but as soon as possible the water was transferred to the Chasco bank, which delivers into the same sluices. The run has proceeded without interruption of importance, ditches, syphons, and pipes being in good order. Two thick seams of pipeclay have been developed, and require a large force of men to cope with them.

COLOMBIAN HYDRAULIC.—March 7: Report on run 200. After a run of 78 days, during which time we washed for 1076 hours with the monitor, we cleaned up a total of $8867·05, or £1775 at a cost of £1200, leaving a profit of about £575. I have repeatedly explained the reasons for the low returns and heavy costs in comparison to what the shareholders have been used to. To repeat, we have been moving sluices, pipes, and monitors, and starting entirely fresh on the south rim. We have at the present moment none of the very rich cement gravel in sight, and we have nearly ½ mile of Spanish tailings to work through before we reach the noted gravel ridge which used to carry the old ditches. When we reach the ridge and again cut the rich streak I expect the returns will again satisfy everyone.

HANNAN'S OROYA GOLD.—The following is an abstract of the mine manager's fortnightly report to March 11:—Lease No. 532 (Oroya Mint west) shaft No. 1 on leader driven to total of 20 feet. Lode consists of three leaders running parallel, all gold bearing.—Shaft No. 2 east. Crosscut driven to total of 52 feet, work discontinued, and men costeening to ascertain course of lode. Have discovered a lode showing nice gold, and sunk trial shaft 5 feet, width of lode 12 to 18 inches. The stone is similar to Australia east lode.—Lease No. 419 (Oroya) main shaft 107 feet level west crosscut driven to total of 11 feet. Men have to keep dirt clear from east crosscut. No change is anticipated until 40 feet is driven, when hope to cut leader passed when sinking shaft. East crosscut driven to total of 47 feet, struck the lode at 41 feet which has developed into great richness, showing gold freely and great patches of mustard gold visible of uniform quality, samples assayed giving 4 ounces per ton. The lode continues rich, but width not yet determined. The formation consists of schistose intermixed with quartz and ironstone, the ore being similar to that at Brown Hill Mine. The lode is west of Brown Hill, but the course has been turned in consequence of disturbance in country at south end of their property.

LAKE VIEW SOUTH.—The following is an abstract of the mine manager's fortnightly report, ending March 11: No. 4 or main shaft sunk to 151 feet, 9 feet timbered. Water in shaft from 3000 to 11,000 in 24 hours. Discontinued sinking till condenser is at work and thus obtaining fresh water for boiler, sinking will then be resumed. Crosscutting E will be started to pick up lode through E property, 100 feet level stripped a further 20 feet, also timbered, lathed, and mullocked and ready for stoping gold seen when stripping. Surface work battery progressing.—(Signed) Wm. Oats, manager.

AUSTRALASIAN.—Fortnightly report of Mr. John James, manager, dated March 12: During the past fortnight the following work has been done:—On the 6th inst. Bishop and party finished their contract, having sunk 17 feet since last meeting. Mr. Steele, surveyor, measured the shaft on the completion of the contract, and certifies that the depth from the collar of the shaft is 753 feet. On the 9th inst. sinking was resumed by day wages, and up to date 7 feet was sunk, making total depth 760 feet, and timbered 18 feet, total timbered 752 feet. The sinking for the last 23 feet has been through gold-bearing country. We are cutting out a chamber on the western side to start crosscutting for the reef, and a lodge will be cut out on the eastern side capable of holding about 6000 gallons of water. The boiler was blown off last Friday, 6th inst., and was cleaned out on Saturday, and I found it in first class order, there being no scale on it, owing to using fresh water.

BIG BLOW.—Report from the mine manager, Mr. W. M. Vivian, March 25:—I beg to report that our operations for the past fortnight have been as follows:—Battery. Everything is working in the smoothest manner with the five heads of stamps, but, unfortunately, the supply of water only allows a run of about five hours per diem. The quartz is still looking very nice, and although the battery has only been running about 24 hours the plates have begun to get coated with amalgam.—Water shaft. A further distance of 9 feet has been driven in the crosscut, making the total distance from the shaft 27 feet. The rock remains the same, and shows no sign of containing any water. Our other operations have been the usual routine, raising and carting quartz to the battery, getting in firewood, condensing water for human consumption, &c.

CENTRAL CHILI COPPER (Panulcillo).—The directors have received the following report from their manager at Panulcillo:—Result of work: January. Mines produced, 720 tons; ores bought, 730 tons; ores smelted, 1950 tons; regulus produced, 237 tons; net profit for month £323.—February. Mines produced, 1000 tons; ores bought, 930 tons; ores smelted, 2450 tons: regulus produced, 283 tons; net profit for month £635.—March. Mines produced, 1100 tons; ores bought, 1150 tons; ores smelted, 2350 tons; regulus produced, 272 tons; net profit for month £920.

COLUMBIA (Charters Towers).—The managers report as follows:—During the fortnight ending March 11 the shaft has been sunk 12 feet 6 inches, and timbered 18 feet, the total depth from the surface is 132 feet 6 inches. The contractors have commenced work sinking, and are making fair progress.

COROMANDEL GOLD.—Superintendent's report for fortnight ending April 4: Prospect shaft. This shaft has been sunk 10 feet since last report, being now 64 feet below the 600 feet level. Sinking has been hindered by the passage of a slide through the shaft, and the consequent timbering of the hanging side. 600 feet level north driven 33 feet, total 54 feet from crosscut. The lode in end is little more than a wall, but is very regular, and carries a little gold.—800 feet level south. The crosscut east of this level has been driven 15 feet, total 447 feet. The ground is extremely hard, and the rate of progress is necessarily slow. There is no change in the appearance of the ground, although we expect to intersect the Coromandel lode within 80 feet of the present end. 260 feet level south of the winze driven 8 feet, total 14 feet from winze. Lode 4 feet wide, carrying small branches and stringers of quartz, which assay 3 dwts. 12 grains of gold per ton.—East shaft. 500 feet level north driven 5 feet 6 inches, total 189 feet 6 inches. Lode 3 feet wide of solid quartz, worth 1 ounce 10 dwts. of gold per ton.—320 feet level north. The drive on the fold at this level has been advanced 37 feet. The quartz is all the size of the drift, and the assay value is 6 dwts of gold per ton. 200 feet level north driven 46 feet 6 inches, total 494 feet 6 inches. There is 12 inches of quartz in present end, which assays 2 dwts. 12 grains of gold per ton.—Mill. Crushing was started on the 30th ultimo, and is now being regularly proceeded with. For some days the yield was slight, but the plates are now getting into working order, and the daily clean up is fairly satisfactory.

CONSORT CONSOLIDATED.—The Johannesberg Consolidated Investment Company (Limited) announce receipt of a report from the above company, containing the following:—500 feet level winze north of crosscut. Through indications at the bottom of the incline shaft I was induced to crosscut north from this adit opposite the south crosscut, and almost directly we came upon a body of ore highly charged with arsenical pyrites (samples of which I have sent you). Some of this contains visible gold, and some gives a ½ ounce prospect of free gold, and should assay ounces. It is hard, and I cannot yet give any definite information as to the quantity. It is dipping at an angle of about 25°, as far as I can see; but whether it is only a "pocket," or will run any distance, I cannot yet ascertain. It is the richest shift we have come across yet in the mine, or I am mistaken as to what the result of the assays will be. There can be no doubt that it is in the line of the old Consort lode.

CRAVEN'S CALEDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, March 12: In the underhand stope from No. 8 level there are two men stoping on Craven's reef, and it averages about 7 inches over the crosscut in No. 8 level. I have got two men stoping on a reef, averaging about 7 inches thick, also I have extended this crosscut a further distance of 9 feet, making a total of 56 feet from the No. 8 old level. The crosscut in No. 7 level has been extended a further distance of 15 feet, making a total of 200 feet from the starting point. Owing to holing through into the hanging wall stopes, I have had to timber about 35 feet, and that makes a stope about 50 feet in length. The reef averages about 8 inches thick of good quality stone. The haulage of quartz for the company for the fortnight is 20 tons, 12 tons of which has been carted to the mill, and leaving 8 tons in the paddock. Hooper and party, tributors over No. 6 level, have got about 12 tons of stone broken. Daddow and party have extended No. 5 level a further distance of 3 feet, making a total of 25 feet, and there is about 5 inches of stone in this face. They have got about 7 tons of stone broken. Shepherd and party in the west of No. 4 level have got about 10 tons of stone broken. Johnson and party, between Nos. 6 and 7 levels, have got about 7 tons of stone broken.

CHIAPAS.—Mining report for fortnight ending March 15: Santa Fé Hill drift No. 3 driven 3 feet, total 191 feet; no change. San José drift driven 23 feet, total 53 feet; no change. Assay, gold 2 dwts., silver 11 dwts., copper 0·38 per cent. Francisco adit driven 7 feet, total 162 feet. Still showing some ore. It appears we have crossed through the ore deposits. Assay, gold 4 dwts., silver 3 ounces 5 dwts., copper 1·20 per cent.—Providencia Aver crosscut east. As this drift continued in country rock we have stopped it. Providencia crosscut east No. 1 driven 11 feet, total 317 feet. We are gradually entering into wollastonite, and as soon as we are entirely in this formation we shall rise to prove the Jardin deposit. San Juan extension rise driven 10 feet, total 48 feet. In very good ore. Assay, gold 1 ounce 9 dwts., silver 15 ounces 15 dwts., copper 10·50 per cent.—Francisco crosscut north-west driven 10 feet, total 58 feet. In poor ore. Assay, gold 12 grains, silver 1 dwt. 12 grains, copper 0·25 per cent. San Juan winze sunk 6 feet, total 10 feet. In fair ore.—Extraction. Old Providencia. Extracted 99 tons of good ore broken from top of stope. Assay, gold 1 ounce, silver 9 ounces 5 dwts., copper 6·04 per cent.—Santa Fé stopes. Sent 29 tons to mill. —San Juan stopes and drifts. Extracted 129 tons of good concentrating ore, assaying gold 6 dwts., silver 6 ounces 16 dwts. 12 grains, copper 2·84 per cent. This ore is considerably improved by being mixed with that of San Juan extension rise in proportion of 1·1.—San Francisco adit and drift. Extracted 91 tons of good average ore. Francisco adit crosscut north-west driven 18 feet, total 18 feet. In very good ore. Assay, gold 9 dwts. silver 4 ounces 19 dwts., copper 2·16 per cent.

EAST MURCHISON UNITED.—The last report states that the battery is erected and the two boilers on the mine, and owing to another nice rain, there should be no trouble in getting the rest of the machinery up.

EAST NIGEL.—The following report has been received from Mr. Bonse, the company's manager, for the fortnight ending March 28:—We have now got our full complement of boys, and work is going on very satisfactorily. We are erecting the winding engine for No. 2 shaft. We have now laid out the mill site, and have excavated the foundation for the engine and boilers. No. 3 incline has been sunk a farther depth of 9 feet, making a total depth of 87 feet. The rock in bottom is getting very broken up, and it looks as if we were approaching the reef. I allowed 120 to 150 feet as the depth we should strike it, but it looks as if we were very near the reef now.

GOLD REEFS OF WEST AFRICA.—Manager reports for week ended March 21:—Western adit, lower level. Have struck Broomassie reef at 404 feet. Have panned several samples of the quartz, which shows a yield of 1¼ to 1½ ounce of gold per ton. The gold is coarse, and the above results are rather below than above the mark.

GOLD FIELDS OF MYSORE.—Mine report for fortnight ending April 7:—South shaft. The 280 feet level crosscut east has been extended 12 feet 6 inches, total 450 feet 3 inches. At a distance of 45 feet from West Balaghat lode a vein of mixed rock, carrying pyrites 10 inches wide, was traversed, the assay value of which is 1 dwt. 8 grains of gold per ton. The crosscut is being continued.—The 380 feet level north. The crosscut west has been lengthened 8 feet, total 193 feet. It is going forth in congenial rock, but nothing of value has been met with since last reported. No. 2 rise has been risen 6 feet 4 inches, total 127 feet above the level, and holed to the middle shaft. The 380 feet level south has been extended 12 feet 6 inches, total 469 feet 5 inches. It is still in dyke rock and does not give any quartz.—The 470 feet level. The end driving north has been extended 19 feet 6 inches, total 235 feet 6 inches. The lode formation is 4 feet wide, which is traversed with stringers of calcareous matter, on the footwall side of the lode. A little quartz of kindly appearance is now forming, and hopes are entertained that we are entering into richer ground. The rise 130 feet south of shaft has been risen 10 feet, total 10 feet above the level. The lode is 3 feet 6 inches wide, quartz, assaying 5 dwts. 13 grains of gold per ton. The south shaft has been sunk 8 feet, total 51 feet under the 470 feet level. The lode formation maintains its size of 6 feet, but the quartzose part of it has diminished in size, which is now about 18 inches wide, assaying 3 dwts. 6 grains of gold per ton.—Stopes: Ground stoped during the past month. The 280 feet level. No. 1 stope north of shaft stoped 9 fathoms 1 foot 11 inches. Lode 8 feet wide, quartz, assaying 1 dwt. 23 grains of gold per ton. Stope south of shaft stoped 1 fathom 5 feet 6 inches. Lode 6 feet wide, mixed quartz, assaying 7 dwts. 4 grains of gold per ton.—The 380 feet level north. Stope south of No. 1 rise stoped 4 fathoms 4 feet 2 inches. Lode 2½ feet wide, assaying 1 dwt. 7 grains of gold per ton. This stope will get into richer ground when lengthened out.—The 380 feet level south. Stope south of No. 1 rise stoped 5 fathoms 5 feet. Lode 6 feet wide, quartz, assaying 3 dwts. 6 grains of gold per ton. —Middle shaft. This has been sunk 8 feet, total 39 feet under the 235 feet level; at this depth it holed into the rise from the 380 feet level, which rise is now being cut down to full size of the shaft.—Prospecting shaft, Golconda block. 73 feet from surface a crosscut has been driven west 20 feet, but failing to find any traces of the pyrites found in sinking driving in this direction has been discontinued, and a crosscut is now being driven east; 14 feet has already been done, but nothing of value has yet been met with.—Ajjapalli. The engine is at work here, and sinking of the shaft is in progress; 6 feet has been sunk since last reported, making the total depth 85 feet from surface. The shaft is going down entirely in lodey matter, showing veins of quartz throughout, assaying 1 dwt. 7 grains of gold per ton.—Cyanide plant. The walling for this building is nearing completion, and the roof timbers are being put on.—Stamping battery. This is running continually, so as to prepare a quantity of sands by the time the cyanide plant is in order to treat it by that process.

GOLDEN DOVE.—The following is the report of work done on the Golden Dove Mine during the month of March:—Golden Dove shafts Nos. 1 and 2. Stoping operations from these shafts are being carried on, and the stopes yielding their usual quantity of ore. —Scott's shaft No. 1. Very little work has been done here this month in sinking, owing to the heavy rains partly filling, repeatedly, the shaft with water, the water coming principally through the old works, although filled up at the surface. Every precaution has been taken to prevent this, such as trenching, &c., but the shaft being on the slope of hill makes it a difficult matter to stop the water from going in after heavy rains. This, however, has not interfered with the stoping from this shaft westward, which is being carried on, and the stope yielding the same results as previously reported. Drive from perpendicular shaft westwards has been driven another 9 feet, total 45 feet. We are now through with this drive into Scott's shaft No. 2. Scott's shaft No. 2 has been sunk another 10 feet, total 87 feet. Here also we have been troubled with surface water, but not to the same extent as in No. 1 shaft. Low level adit has been advanced another 15 feet, total 408 feet. The striking of Scott's lode at this level has been already notified to you by cablegram, and samples of same forwarded. We have now cut into the lode 8 feet and have not yet struck the footwall, but judging from the very rich ore being taken from the face of drive to-day, I believe we are very close to it. The lode, in addition to carrying a very fair amount of free gold, is also rich in pyrites, which from very crude tests made here have also proved to contain gold in considerable quantities. The new road for the transport of ore from the mine to battery will be finished in about a week's time.—Battery. The work of rivetting the battery is completed, and the working parts are now being added. Little more remains to be done to the battery itself, the main thing being now the arrangement for water supply, amalgamating plant, and house. The boiler, stone crusher, pump, &c., have been safely crossed, and the pump is now being fixed in the well. Some of the hands are now engaged in cutting timber for fuel, of which there is now fully 100 tons on hand.

HANNAN'S REWARD.—Extracts from manager's letters, February 29: In my last letter I forgot to mention that if you decided on my going to London, I intended to take 2 tons of ore—1 ton from the main reef and a ton of pyrites ore, to be treated by Clarkson-Stanfield concentrator; also to go to North Wales and see the process working there.—I am certain you are on the right track in trying the Clarkson-Stanfield process. I consider it the best dry concentrator.—March 14. The water is now making at the rate of 500 gallons in 24 hours. That the crosscut at the 300 feet level on contract at £6 per foot, at the present time the ground is worth the money, but I think there will be a change in the ground for the better before the men reach the main reef. The contract is for only 60 feet.—At 210 feet level the crosscut east has been extended a farther distance of 5 feet 6 inches, total to date 15 feet 6 inches. The vein is keeping very regular, and during the week some very coarse gold has been showing, 1 piece of stone showed about an ounce of gold.

HETTY.—Extract from manager's report dated April 3: Since last reporting, I am pleased to say that I have at last come upon Black reef, that even in the pan gives a prospect which is all one could desire. The strike was made in shaft 2 north, and the reef, some 6 inches thick, would, I believe, assay several ounces to the ton. The pump is fixed at shaft 7, and the supply of water of excellent quality seems ample for present requirements. My report on work for the past week is as follows:—Shaft 2 north sunk 13 feet, total 22 feet. Reef 6 inches thick, struck at 21 feet, giving a fine prospect. Shaft 3 north sank 11 feet, total 21 feet. Still in blue bars and shales. Shaft 4 west drive driven 11 feet, total 31 feet. Reef was lost for a few feet, but regained on rising; no panning made.—Shaft 4 B. A new shaft west of No. 4 sunk 10 feet. I cannot form an opinion of the formation here just at present. Shaft 4 north sunk 7 feet, total 12 feet. We have passed through a small seam of reef that gives fair prospects in the pan. Shaft 12 sunk 5 feet 6 inches, total 18 feet. We have here the flat Black reef formation for 6 feet, then quartzites of the older formation dipping east at 80°. The Black reef footwall sandstone is quite absent, and no sign of reef.—I am afraid that the Black reef, northern limit, ends just above shaft 4 north. These quartzites belong to another belt, lying east of the west red shales. They contain pepply stringers, which I have panned without results.—Shaft 6. This has been sunk 10 feet, total 47 feet. Driving will be commenced shortly. Shaft 8 was sunk to 74 feet. Platform put in and driving commenced at 71 feet. East drive and west drive each driven 7 feet; no change. Shaft 9 sunk 11 feet 6 inches, total 56 feet 6 inches. We to-day struck good looking banket, which have colours in the pan. Driving and sinking for the week 97 feet. Total sinking and driving to date, 926 feet 6 inches. I intend sinking another shaft west of No. 9 when I can spare boys (Kaffir miners) from the Black reef workings.

KEMPINKOTE.—Mine report for fortnight ending April 6: Garland's shaft. 500 north drive has been driven 45 feet, total distance from main crosscut 269 feet 6 inches. We are carrying about 5 feet of the footwall, part of the lode assaying 8 grains of gold to the ton.—500 north drive No. 1 crosscut west. 100 north of main crosscut has been driven 11 feet 6 inches, total distance from footwall 42 feet. The end is in schist.—500 north drive No. 2 crosscut west. 210 feet north of main crosscut we have started No. 2 crosscut west, and have driven it 4 feet 3 inches, total distance from footwall 12 feet 3 inches. Lode in the end full size of the drive assaying 2 dwts. 10 grains of gold to the ton. 500 south drive has been driven 25 feet 9 inches, total distance from main crosscut 225 feet 3 inches. We are carrying the footwall and 5 feet of the lode, assaying 9 grains of gold to the ton. 245 north drive, No. 2 winze, drive south, at the bottom, has been driven 6 feet 9 inches, total distance 6 feet 9 inches. Lode in the end full size of the drive, assaying 15 grains of gold to the ton. 245 south drive has been driven 7 feet, total distance from main crosscut 686 feet 6 inches. The drive having entered schist its drivage was stopped, and the machine was put to crosscut west close to the end. After driving this 15 feet, total distance 18 feet, and having met with nothing but schist in this, its drivage was suspended. This machine has been put to drive the No. 2 crosscut east in 183 south drive. 183 north drive, No. 1 crosscut west, has been driven 3 feet 9 inches, total distance 54 feet 3 inches. This 3 feet 9 inches in being driven in schist has proved this to be the hanging wall, and the drivage has been suspended. 183 south drive, No. 2 crosscut east, has been driven 11 feet 9 inches, total distance 77 feet 3 inches. After passing through about 3 feet of schist lode was again met with. Lode in the end full size of the drive, giving an average assay of 8 dwts. 19 grains of gold to the ton.

LISBON-BERLYN.—The manager's advices give the following details of work done during March:—Mining. Theta North driven 44 feet; thickness of reef, 14 inches; output, 358 tons; assay value, 8 dwts.; Theta North No. 2 driven 223 feet; thickness of reef, 10 inches; output, 57 tons; assay value, 2·62 dwts.; Theta south driven 305 feet; thickness of reef, 14 inches; output, 1031 tons; assay value, 11·85 dwts.; Theta south (prospecting) driven 160 feet; thickness of reef, 20 inches; output, in reserve; assay value, 13·20 dwts.; Theta mill section driven 163 feet; thickness of reef, 10 inches; output, 81 tons; assay value, 5·75 dwts.—Milling. 10 stamps were kept running at times when dry crushed ore bin was full, and ran in all 5·8 days, and crushed 170 tons ore of an average assay value of 9 dwts. per ton, yielding 9·1 ounces bullion.—Dry crushing. Ore breakers ran all through month, with stoppage of two days to put in new grizzley, and crushed 1204 tons ore.—Cyaniding. 1204 tons dry crushed ore and 180 tons tailings were put into the vats during the month, and bullion recovered amounted to 842·29 ounces. Total bullion recovered 851·39 ounces, of an approximate value of £1934.

MENZIES UNITED.—The manager (Mr. Robert Sheridan) reports under date February 28 the following development work: Balkis lease. The shaft is now sunk to a depth of 56 feet from the surface. A shaft on this lease has been sunk to a depth of 28 feet. —Poppoea. A shaft sunk to a depth of 26 feet.—Cleopatra. A shaft sunk to a depth of 12 feet.—Baltimore. A shaft sunk to a depth of 20 feet.—Fastnet. A shaft sunk to a depth of 25 feet.—I think the best course to pursue at present will be to push on as quickly as possible with our No. 1 or main shaft, and pick up the Friday reef, and for that purpose concentrate all our strength on the Balkis lease, where I think, according to present developments, our best chance of success lays, also to try and pick up the vein now being worked by the Lady Shenton North. I see no reason why we should not meet with both these veins.

MOUNT LYELL MINING AND RAILWAY.—Engineer in charge of mine reports week ending March 13: No. 1 tunnel, north drive. Distance driven for week 3 feet, total 9 feet. Face in high grade ore.—No. 3 tunnel, south drive. Distance driven for week 3 feet, total 557 feet.—No. 4 tunnel, south drive. Distance driven for week 4 feet, total 465 feet.—No. 4 tunnel, south drive, No. 3 crosscut. Distance driven for week 4 feet, total 22 feet. Face improving and in high grade ore.—No, 4 tunnel, south drive, No. 2 rise. Chamber for No. 2 rise is being opened out at 205 feet, preparatory to stoping.—No. 4 tunnel, south drive, No. 4 crosscut. Distance driven for week 2 feet, total 8 feet.—No. 4 tunnel, south drive, No. 3 rise. Chamber is being opened out for No. 3 rise at 410 feet.—No. 4 tunnel, south drive, No. 5 crosscut. Work has been discontinued in this face.—Surface work. Machinery site, excavation completed. Brickwork for compressor bed nearly completed. Rivetting up of air receiver proceeding satisfactorily. Erection of store shed, blacksmiths' shop, &c., making good progress.—Open cut. Excavation for self-acting incline completed with the exception of small terminal cutting.—No. 2 bench. Clearing away of spoil from old quarry, and excavation of overburden proceeding satisfactorily. A face is also being prepared in the pyrites, which are breaking well.—Progress report for week ending March 13:—Hauling line. Now in more or less constant use, foundation walls of mine ore bins finished.—Smelter building. Laying piping for water and fire service, shop work on doors, &c., in progress.—Crusher building. Framework of all parts finished, iron roofing and siding in progress, flooring sampling room, frame of ore crusher erected, framing trestles of short siding from through tram to crusher bins, formation of same nearly finished.—Blast furnaces. Smoke stack of No. 1 in place, bricking inside of bustle pipes, hinders finished.—Hot-blast stoves. Hot-air connections with blast main in place and bricked in, cold-blast manifold pipes in place, connections of same with stoves and blowers in progress.—Converter department. Hill flue in progress.—Flux Quarries. Quarrying limestone, uncovering quartz deposit and forming siding to same. Weather good.—Railway superintending engineer reports March 11:—Entire length of line now in progress. The bridges are also being erected very rapidly. Weather fine and dry.

MYSORE WEST AND MYSORE WYNAAD CONSOLIDATED.—Tank Mine. Monthly report for March. South shaft. The sink was cleared towards the end of the month, and sinking operations were resumed. The shaft is now down 520 feet; last reported, 518 feet; progress, 2 feet. The timbermen have arrived, and are at work on the skiproad, and throwing over the ladder-road in the underlie part of shaft. In the downright the skiproad is finished to surface, and a completely new ladderway has been put in from top to bottom. Air main has just arrived, and will be put in. 507 level No. 1 drive north, on west lode, is now 79 feet from the crosscut. Progress 32 feet 6 inches. The lode keeps its defined shape, and has opened out slightly, the quartz now being 20 inches wide, and worth 4 dwts. per ton. 507 No. 2 drive south, on east lode, is now in 64 feet 9 inches. Progress 40 feet 9 inches. The lode has flattened very considerably, and the level has turned round nearly due east. Quartz is 18 inches wide, and is worth 15 dwts. per ton.—507 No. 3 drive north, on east lode. This has been driven 39 feet, making a total of 58 feet 6 inches from shaft. The end is very mixed, and the quartz in this end appears like the apex of a sharp curve, the lode dipping away in both directions. The lode is about 2 feet wide, and is worth 4 dwts. per ton. 450 north drive was stopped at 498 feet 6 inches. Work has been resumed here. 450 south drive, on east lode, was driven in to 31 feet, where it ran in under stopes back of 450. Here a winze was started which has been sunk by hand 9 feet 9 inches. The whole of winze is in quartz, which at present is running down vertical. The stone here is worth 5 dwts. per ton. 450 north winze sunk to 27 feet 6 inches and stopped. Progress 7 feet. The quartz which was very big in bottom of level at this depth evidently split. The lode connection will be worked up by rises from the 507 north on west lode, and 507 north on east. 450 north stope is 3 feet wide, and worth 5 dwts. per ton. There is still another branch of quartz in the hanging of about 2 feet of quartz. 450 south, No. 1 stope (stopped), 6 feet of quartz. Worth 7 dwts. per ton. 450, south No. 2 stope, 4 feet of quartz. Worth 15

dwts. per ton.—South Intermediate. Stope 13 feet of quartz, worth 4 dwts. per ton. Walker's shaft is down 70 feet 6 inches; progress, 15 feet. The granite crosscourse is letting down a lot of water. We have carried across an air main, and moved a small receiver to the shaft, putting down a 3 inch main. We shall put in a donkey to keep the water. The ground under the crosscourse is very hard. Owing to severe outbreaks of smallpox in the surrounding villages, we have been short of labour in some departments. We have had a few cases of the disease on the mine, but they have not been bad cases. During the month the mill ran for 520 hours, and crushed 1300 tons of quartz, which yielded 701 ounces of bar gold.

No. 7 NORTH-EAST QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers, March 13:—The stone (mentioned in my last report) in the drive put in by Hamilton and party has cut out again, and there is only a thin leader on the hanging wall at present. They are still driving. I have let a block on the western side of the shaft below No. 2 level to Balks and party. There they are underhand stoping on about 6 to 8 inches of stone of good quality. Penhallwuck and party have a good face of stone right through their back stopes that will average 14 inches, I think of good quality. They have about 10 tons broken below. There is no change to report in the block worked by Ferguson and party at the back of No. 3 level. Mount and party have sunk a winze down from No. 3 level about 24 feet, and at present there is 6 to 8 inches of stone on the footwall. Wherry and party have a face of stone something similar to the last report, viz., about 18 inches all through. This party have about 30 tons broken below ready for hauling. The water is still very heavy in the shaft, having to bale every chance we get. We have hauled for the fortnight 733 tanks. A sight-feed lubricator was obtained, and put on for the pump below, and I may say it is a great improvement.

NIGEL DEEP.—Extract from manager's report, dated March 19: Shafts. The present depths of the shafts upon the property are as follows: Shaft A, depth 44 feet; shaft B, depth 132 feet; shaft C, depth 230 feet; shaft D, 223 feet; shaft E, depth 317 feet.

ORIENTAL.—Superintendent's report for fortnight ending April 4:—Mining. Taylor's engine shaft. During the past two weeks this shaft was deepened 4 feet, total depth 132 feet. Considering the great difficulties we have to contend with in regard to the water, and that the donkey pumps are unable to do more than they are doing, we considered it advisable to suspend sinking operations until we have fixed the temporary pumping engine and pit-work. The erection of the engine has been commenced, and will be proceeded with as rapidly as possible.—Bridge shaft. The total length of the 105 feet level south of this shaft is now 140 feet, showing an advance of 3 feet 6 inches in the fortninght. The lode is about 2½ feet wide, carrying stringers of quartz, and is intermixed with country rock. A sample taken from it yielded 2 dwts. 15 grains of gold per ton.—Trial shaft. The total depth of this shaft is 62½ feet, of which 2½ feet were sunk in the fortnight. Owing to a temporary derangement of the donkey pump, progress in sinking was somewhat delayed. The lode is 5 feet wide, and composed of quartz containing a large quantity of arsenical pyrites. The sample from it assayed 12 grains of gold per ton.—Surface operations. The masonry for the temporary pumping engine has been completed, and other surface operations are progressing satisfactorily.

COREGUM.—Superintendent's report for fortnight ending April 7: Taylor's shaft sunk 8 feet 6 inches, depth below the 690 feet levels 13 feet. The lode is composed chiefly of schist, interspersed with quarts and pyrites. A sample taken from the quarts gave by assay 19 dwts. of gold per ton. The sinking is suspended while the 960 feet levels north and south are being extended 25 feet in each direction. The position of these levels has been determined by the surveyor to correspond with the depth of 960 feet level south being driven from Wallroth's. The 860 feet level south driven 25 feet, total 217 feet. Lode 1 foot 6 inches wide, assay value 2 ounces 3 dwts. 11 grains. The No. 1 winze 860 feet level south sunk 5 feet, total 24 feet. Lode 1 foot wide, assay value 1 ounce 14 dwts. 20 grains. No. 1 rise 860 feet level south commenced, risen 5 feet. Lode 1 foot 5 inches wide, assay value 2 ounces 16 dwts. 14 grains, which communicated with No. 2 winze from 760 feet level south. The 860 feet level north driven 15 feet, total 104 feet. Lode 1 foot 3 inches wide, assay value 9 dwts. 19 grains. No. 1 winze 860 feet level north sunk 4 feet, total 8 feet. Lode 1 foot 6 inches wide, assay value 12 dwts. No. 3 winze 760 feet level south sunk 5 feet, total 50 feet 6 inches. Lode 1 foot 3 inches wide, assay value 2 ounces 12 dwts. 6 grains. No. 3 rise 760 feet level south risen 3 feet 6 inches, total 49 feet 6 inches. Lode 6 inches wide, assay value 9 dwts. 19 grains. Communicated with No. 3 winze from 66 feet level south. No. 3 winze 660 feet level south sunk 2 feet, total 60 feet 6 inches. Lode 6 inches wide, assay value 1 ounce 1 dwt. 19 grains. Communicated with foregoing rise. No. 4 winze 660 feet level south sunk 5 feet 6 inches, total 23 feet. Lode 9 inches wide, assay value 13 dwts. 2 grains. Level north from back of No. 4 rise 280 feet level south resumed, driven 17 feet, total 145 feet 6 inches. Lode 6 inches wide, assay value 1 ounce 12 dwts. 18 grains. Wallroth's shaft sunk 4 feet 9 inches, total 1186 feet 9 inches. The lode shows no material change. The excavations for shoot pass below the 1160 feet levels are quite complete and necessary timber for its construction is being fixed. The 1060 feet level south driven 15 feet 3 inches, total 295 feet 3 inches. Lode 6 inches wide, assay value 8 dwts. 17 grains. No. 1 winze 1060 feet level south sunk 3 feet 3 inches, total 43 feet. Lode very small. Crosscut west 1060 feet level south driven 15 feet 3 inches, total 136 feet. No discovery. The 1060 feet level north driven 9 feet total 229 feet 3 inches. No. 1 winze in this level sunk 5 feet, total 47 feet. The lode at each of these points continues pinched. The 960 feet level south driven 22 feet 6 inches, total 787 feet 6 inches. Lode 1 foot wide, assay value 10 dwts. 21 grains. No. 2 winze 960 feet level south sunk 2 feet 3 inches, total 78 feet 6 inches. No lode. No. 3 winze 960 feet level south sunk 1 foot 9 inches, total 29 feet 3 inches. Lode 6 inches wide, assay value 9 dwts. 19 grains. The 960 feet level north driven 14 feet 3 inches, total 174 feet. Lode 6 inches wide, assay value 6 dwts. 12 grains. The 760 feet level north driven 9 feet, total 465 feet 6 inches. Just a trace of quartz showing. No. 1 winze level north from crosscut east 460 feet level south sunk 4 feet, total depth 58 feet. Lode 1 foot wide, assay value 8 dwts. 17 grains. The 460 feet level north driven 15 feet 9 inches, total 329 feet 6 inches. Reef has pinched here also. No sample. No. 2 winze 460 feet level north sun6 8 feet, total 23 feet 6 inches. Lode 1 foot 6 inches wide, assay value 3 ounces 5 dwts. 8 grains. No. 2 winze 360 feet level north sunk 2 feet 6 inches, total 49 feet 9 inches. Lode small. The 215 feet level south driven 5 feet 9 inches, total 326 feet from shaft. Lode small. The 215 feet level south driven 5 feet 9 inches, total 326 feet from shaft. Lode 8 inches wide, assay value 8 dwts. 17 grains. Low's shaft sunk 4 feet 6 inches, total depth 825 feet 10 inches. We hope now to make better progress in sinking as the excavations for shoot pass are completed. The 810 feet level south from point of intersection driven 27 feet, total 91 feet 9 inches. Lode 1 foot wide, assay value 3 dwts, 6 grains. The 810 feet level north from point of intersection driven 11 feet 9 inches, total 33 feet 9 inches. Lode 1 foot 6 inches wide, assay value 4 dwts. 8 grains. The 710 feet level south driven 14 feet, total 325 feet 3 inches. Lode 3 feet wide, assay value 6 dwts. 12 grains. No. 2 winze 710 feet level south sunk 6 feet, total 32 feet. Lode 2 feet 9 inches wide, assay value 13 dwts. 2 grains. No. 1 winze 710 feet level south driving north on lode from point of intersection sunk 5 feet, total 61 feet. Lode 2 feet 9 inches wide, assay value 5 dwts. 10 grains. The 610 feet level south driven 5 feet, total 286 feet 6 inches. Lode very small, No sample. No. 1a winze 610 feet level south sunk 2 feet 6 inches, total 30 feet. Communicated with No. 1 rise. 710 feet level south driven north on lode from point of intersection. The 510 feet level south driven 5 feet, total 423 feet 9 inches. Lode very small. No sample. No. 2 winze 510 feet level south sunk 7 feet 9 inches, total 12 feet. Lode 2 feet wide, assay value 1 ounce 1 dwt. 19 grains.—Probyn's shaft. The 1150 feet level north driven 8 feet 6 inches, total 73 feet 6 inches. Lode 1 foot 3 inches wide, assay value 9 dwts. 19 grains. The 1050 feet level south driven 5 feet 6 inches, total 154 feet. Lode shows no improvement. No. 1 winze 1050 feet level south sunk 5 feet, total 37 feet 6 inches. Lode 2 feet 6 inches wide, assay value 4 dwts. 8 grains. No. 1 winze 1050 feet level north sunk 2 feet 3 inches, total 111 feet. Lode 1 foot 3 inches wide, assay value 3 dwts. 6 grains.—Stopes for the month of March. Taylor's shaft. Back of 760 feet level south stoped 26 fathoms. Lode 3 feet 9 inches wide, assay value 4 ounces 13 dwts. 15 grains. Bottom of 660 feet level south stoped 14¾ fathoms. Lode 7 feet wide, assay value 4 ounces 3 dwts. 19 grains. Bottom of 560 feet level south stoped 38½ fathoms. Lode 1 foot 10 inches wide, assay value 1 ounce 7 dwts. 5 grains. Bottom of 460 feet level south stoped 71¾ fathoms. Lode 3 feet wide, assay value 1 ounce 3 dwts. 1 grain. Bottom of 360 feet level south stoped 9¾ fathoms; exhausted. Bottom of level south from back of No. 4 rise to 280 feet level south stoped 4 fathoms. Lode 1 foot 9 inches wide, assay value 2 ounces 12 dwts. 6 grains. Bottom of level north from back of No. 4 rise 280 feet level south stoped 8 fathoms. Lode 2 feet 6 inches wide, assay value 2 ounces 3 dwts. 13 grains. Back of level north from back of No. 4 rise 280 feet level south stoped 4 fathoms. Lode 1 foot 6 inches wide, assay value 10 dwts. 21 grains.—Wallroth's shaft. Cutting plats at 1160 feet level stoped 14 1-5th fathoms. Bottom of 860 feet level south stoped 8¾ fathoms. Lode 2 feet wide, assay value 8 dwts. 4 grains. Back of 760 feet level south stoped 20½ fathoms. Lode 3 feet 3 inches wide, assay value 9 dwts. 6 grains. Bottom of 660 feet level south stoped 14¾ fathoms. Lode 1 foot 9 inches wide, assay value 1 ounce 3 dwts. 5 grains. Back of 660 feet level south stoped 17 fathoms. Lode 2 feet wide, assay value 6 dwts. 12 grains. Bottom of 660 feet level north stoped 9¾ fathoms. Lode 2 feet 3 inches wide, assay value 1 ounce 12 dwts. 2 grains. Bottom of 560 feet level south stoped 21¾ fathoms. Lode 3 feet 7 inches wide, assay value 15 dwts. 21 grains. Back of 560 feet level south stoped 47¼ fathoms. Lode 1 foot 10 inches wide, assay value 2 ounces 2 dwts. 11 grains. Bottom of 560 feet level north stoped 8¼ fathoms. Lode 1 foot 3 inches wide, assay value 2 ounces 7 dwts. 21 grains. Bottom of 460 feet level south stoped 12 fathoms. Lode 1 foot 4 inches wide, assay value 13 dwts. 18 grains. Bottom of 460 feet level north stoped 4¼ fathoms. Lode 1 foot 6 inches wide, assay value 2 ounces 10 dwts. 2 grains. Back of level south from crosscut east 460 feet level south stoped 11¼ fathoms. Lode 1 foot 9 inches wide, assay value 3 ounces 4 dwts. 5 grains. Back of level north from crosscut east 460 feet level south stoped 4 fathoms. Lode 1 foot wide, assay value 6 dwts. 12 grains. Bottom of 360 feet level south stoped 48 fathoms. Lode 2 feet wide, assay value 1 ounce 3 dwts. 22 grains. Bottom of 360 feet level north stoped 6 fathoms. Lode 1 foot 9 inches wide, assay value 1 ounce 18 dwts. 2 grains. Bottom of 280 feet level south stoped 7 fathoms. Lode 2 feet 1 inch wide, assay value 1 ounce 2 dwts. 7 grains. Back of 215 feet level south stoped 6¼ fathoms. Lode 1 foot wide, assay value 4 dwts. 8 grains. Bottom of 215 feet level north stoped 26 fathoms. Lode 1 foot 3 inches wide, assay 15 dwts. 8 grains. Back of 215 feet level north stoped 1¼ fathoms. Lode 1 foot wide, assay value 10 dwts. 21 grains.—Low's shaft. Cutting plats at 810 feet level stoped 6¾ fathoms. Bottom of 710 feet level south stoped 9 fathoms. Lode 6 inches wide, assay value 4 dwts. 21 grains. Bottom of 610 feet level south stoped 13 fathoms. Lode 1 foot 9 inches wide, assay value 14 dwts. 3 grains. Bottom of 510 feet level south stoped 6 fathoms. Lode 1 foot 3 inches wide, assay value 6 dwts. 12 grains. Bottom of intermediate level north back of 200 feet level south stoped 7 fathoms. Lode 2 feet wide, assay value 1 ounce 2 dwts. 21 grains.—Probyn's shaft. Bottom of 850 feet level south stoped 4 fathoms. Lode 1 foot 3 inches wide, assay value 5 dwts. 10 grains. Back of 550 feet level south stoped 11 fathoms. Lode 1 foot 8 inches wide, assay value 1 ounce 11 dwts. 13 grains.—Exploratory work. Taylor's shaft. Crosscut west 460 feet level south driven 7 feet, total 68 feet. No discovery; suspended.—Wallroth's shaft. Crosscut west 1060 feet level north driven 28 feet, total 32 feet 3 inches. Crosscut east 760 feet level north driven 2 feet 3 inches, total 5 feet 9 inches. Crosscut west 215 feet level north driven 10 feet 3 inches, total 19 feet 6 inches. No discovery in either of the foregoing crosscuts. Crosscut east 215 feet level north driven 5 feet 3 inches, total 22 feet 6 inches. In the end we have intersected quartz, which so far as seen is widest in bottom of drive. It is not yet sufficiently opened out to give any particulars as to size, a sample from it gave 5 dwts. 10 grains of gold per ton. The climax machine is now working on this which will open it out expeditiously, and hope in next report to give size and other particulars of this reef.—Munday's lode explorations. 280 feet level south driven 5 feet, total 132 feet 9 inches from crosscut west. Lode 1 foot wide, assay value 6 dwts. 12 grains.—Probyn's shaft. Crosscut east from end 950 feet level south extended 24 feet, total 42 feet. No discovery. During the month of March we crushed 5338 tons of quartz, which produced 5118 ounces of gold. In addition to this 5175 tons of tailings were treated, which yielded 939 ounces of gold, total return 6057 ounces of gold.

PUNJOM.—Report for February: The secretary of the Punjom Mining Company (Limited) advises us that he has received the following report on work done during the month of February from the manager at the mines:—Mining. We have continued to give our best attention to all work coming under this head, and I am also pleased to be able to tell you that our prospects are more encouraging than they have been for some time, as evidenced by the improved quality of the ore treated, and the fact that much of this ore is being got at and below our intermediate level.—August shaft, 200 feet level. We are still without anything of special value to note at this level. The crosscut we had commenced to go east off the north drive on the course of Gillies reef at date of my last report having got into very wet and troublesome ground was abandoned in the early part of the month, and the drive continued a further distance of 15 feet, where firmer ground was met with and a new crosscut opened. We are hoping to have less trouble and expense here. The ground continues very much broken, however, and I think there is but little chance of the reef making again until more settled country is found. In the crosscut we were beginning at the same date to go out in search of the continuation of our east and west reef has passed through quite a change of formation, carrying about 2 feet of very low grade ore. I have no doubt it is the commencement of a new splice of ore, and will prove to be the reef we are looking for. We shall open a drive to go west on the course of this ore within the next few days.—Intermediate level. This point is without change to report further than that the ore is generally showing signs of a slight improvement in quality. The western chute of ore contributes largely to our output, and the development made daily there is adding to our reserves.—New Leader. The various points at work here continue to give a large quantity of ore for the mill, the output for the month being 544 tons, or more than one-half of the total month's milling. The quality is payable, and I can still see a large quantity in reserve. We have connected with the 110 feet level, and are now putting things in order there for the better carrying on of the work. The ventilation is now good, and I am hoping to see a great deal of the ore won brought to the surface by means of the August shaft within the coming month. Drivage for the month, 299 feet 6 inches: ore mined, 1000 tons; made up as follows—August shaft, 456 tons; new leader, 544 tons.—Milling. This was carried on during 26 days, Crushing, 996 tons; yielding 448 ounces 10 dwts. of melted gold.—General. A great deal of work, which at present may be taken under this head, but which will come before you under specific headings in the near future, has been attended to. The calcining plant we were erecting at the date of my last report was completed on the 14th inst., and work commenced on the concentrates, 12 tons of which yielded 52 ounces of smelted gold. This with the 448 ounces 10 dwts. got from the mill, and 2 ounces 6 dwts. from our tributers, makes the month's output 502 ounces 16 dwts. of gold. I am pleased to tell you that the plant is a great success, and I am hoping we may find it most useful in treating much of our weathered concentrates and tailings now stacked on the mine. I cannot yet give the cost per ton for treatment, but may assure you a good margin will be left as profit. Active measures are being taken in the matter of erecting the water wheel now lying at Pekan, and already a good beginning has been made in opening the water race to the main dam, so as to bring in the required supply of water. I may tell you we hope to get quite 25 horse-power from this wheel, a great consideration in the fact that our timber reserves are getting further away every day. Of course, a much bigger and still cheaper scheme will have to be taken in hand at no very distant date. I am sorry to say the disease amongst our cattle caused us great loss and inconvenience. We lost 22 heads altogether, and this, too, at a time when we could so ill afford it. We are replacing them with the water buffaloes of the country, an animal apparently not so susceptible to pleuro-pneumonia as the Indian or Siamese bullocks. We are also getting boats, so as to be able to handle the firewood, &c., near our main dam by this means, and thus do away with carting wherever practicable.—Cyanide works. Mr. Wilson, the new chemist, arrived here on the 13th inst., and is now at work on tests in the laboratory, preparatory to beginning work on a large scale.—Labour. The supply of this was never so good as at the present moment, thanks to our action with the new opium farmer.—Health. This, I am pleased to say, is fairly good.—Rainfall. The total rainfall for the month 6¼ inches.—Hongkong, March 24.

TOLIMA.—The directors have received advices by the mail of April 24 from their mines, of which the following is an abstract:—Frias estimated February returns, 120 tons, fine silver valued at 33d. per ounce, £4484 8s.; ditto cost, £3996 13s. 10d.; profit, £487 14s. 2d. The underground agent reports 109 fathoms 4 feet 5 inches of ground expended, of which 73 fathoms 2 inches were productive, leaving 36 fathoms 4 feet 3 inches of unproductive ground. The acting superintendent explains that the difference between the amount cabled as the estimated profit for February (£800) and that given as above is owing to the actual cost underground having exceeded the estimated sum. He reports that the tip plat in the 150 fathom level, and the skip road to that level having been completed, the sinking of the shaft was to be speedily resumed. The 140 fathom west end continues to present a promising appearance, giving some good stones of mineral, although not enough to value. He further states that a lode of a promising character has been cut in the west end drivage, at the new crosscut, and that the total depth attained by the Barrow shaft was 211 feet 5 inches.—Underground department. Engine shaft. The tip plat is finished at the 150 fathom level, and the skip road is brought down to same. We hope to be in a position to resume sinking of the engine shaft by the end of the current month. 150 fathom west end footwall side was driven 20 3 feet by two men at $70 per fathom, thus being 123·5 feet as total west of the 150 east winze No. 1, and the lode yielded 10 cwts. of mineral per fathom, but the present forebreast is rather poor. 150 fathom east end was driven 12·5 feet by two men at $80 per fathom, thus being 139·5 feet as total east of the 150 east winze No. 1, and the lode continues poor. 150 fathom east winze No. 1 was sunk 16 feet by eight men at $190 per fathom, thus being 69 feet as total below the sole of the 150 fathom level. The last 7 feet has been in an improved lode that yields 10 cwts. of mineral per fathom. 150 fathom crosscut to footwall side was driven 14 feet by two men at $125 per fathom. This is the extension of the crosscut from the engine shaft, and it is communicated to said level. 140 fathom west end was driven 15 feet by two men at $75 per fathom, thus being 293 feet as total west of the engine shaft, and the lode yielded some good patches of mineral here and there, but not in quantities to value. 140 fathom east end was driven 33 feet by four men at $68 per fathom, thus being 316 feet as total east of the engine shaft, and the lode remains unchanged. 140 fathom west back stope No. 1 was stoped 35 feet by four men at $30 per fathom, and it yielded 2 tons of mineral per fathom. 140 fathom west back stope No. 1a was stoped 30 feet by four men at $30 per fathom, and yielded 3 tons of mineral per fathom. 140 fathom west end from 130 east winze No. 1 was driven 30·7 feet by four men at $75 per fathom, and the lode remains poor. 130 fathom west end was driven 24 feet by two men at $35 per fathom, thus being 674·2 feet as total west of the engine shaft. The lode during the month showed an improvement, and it yielded 15 cwts. of mineral per fathom, but the forebreast again shows a decline. 130 fathom west back stope No. 1 was stoped 28·7 feet by two men at $30 per fathom, and it yielded 1½ ton of mineral per fathom. 130 fathom east back stope No. 1 was stoped 30 feet by four men at $40 per fathom, and it yielded 6 tons of mineral per fathom. 130 fathom east back stope No. 2 was stoped 21 feet by two men at $45 per fathom, and it yielded 15 cwts. of mineral per fathom.—130 fathom east end north branch. This was started at a point about 48 fathoms west of the engine shaft, and it was driven 6·5 feet by two men at $65 per fathom. It is being driven upon a branch of lode that is supposed to correspond with the north branch as seen in the 120 fathom level. 130 fathom east crosscut north was driven 5·5 feet by two men at $140 per fathom, and it is without change to note. 120 fathom east end north branch was driven 33 feet by four men at $80 per fathom, thus being 79·5 feet as total east of the winze, and it yielded 1½ tons of high-grade mineral per fathom.—120 fathom west end north branch was driven 19 feet by four men at $90 per fathom, and it yielded 5 cwts. of mineral per fathom. 120 fathom west crosscut to north branch was driven 4·8 feet by two men at $110 per fathom, and it has intersected said branch. 120 fathom east end from above crosscut was driven 4·5 feet by two men at $85 per fathom, and it is communicated to the above west end upon the north branch. 120 fathom west back stope No. 3 was stoped 34 feet by two men at $35 per fathom, and it yielded 1½ ton of mineral per fathom. 120 fathom west back stope No. 3a was stoped 66 feet by four men at $42 per fathom, and it yielded 3 tons of mineral per fathom. 120 fathom west back stope No. 3b was stoped 9 feet by two men at $40 per fathom, and it yielded 10 cwts. of mineral per fathom. 110 fathom east end was driven 18·3 feet by two men at $75 per fathom, thus being 1031·2 feet as total east of the engine shaft, and the lode continues strong and well defined, but yet poor. 110 fathom east bottom stope No. 2 was stoped 16 feet by two men at $40 per fathom, and it yielded 5 cwts. of mineral per fathom. 110 fathom east end north branch was driven 11 feet by two men at $100 per fathom, thus being 121 feet as total east of the winze, and it yielded 15 cwts. of mineral per fathom. 90 fathom east end was driven 19 feet by two men at $70 per fathom, thus being 1229·3 feet as total east of the engine shaft, and the lode is unchanged. 90 fathom east bottom stope No. 2 was stoped 49 7 feet by two men at $23 per fathom, and it yielded 1½ ton of mineral per fathom. Shallow adit was driven 12 feet by four men and a boring machine at $160 per fathom, thus being 428·5 feet as total west of the crosscut, and the lode is yet poor. West end footwall side, new crosscut, was driven 15 feet by two men at $140 per fathom, and it has intersected a portion of lode, and same is being driven upon during current month.—Real de Frias. 35 fathom west end was driven 35·7 feet by four men at $45 per fathom, thus being 263 feet as total west of the shaft, and the lode continues poor. 35 fathom east end was driven 22·5 feet by four men and a boring machine at $110 per fathom, thus being 155·5 feet as total east of the shaft, and the lode yet continues poor.

ROTHERY BLOCK.—Extracts from the manager's report, dated April 3; Work done during the past week is as follows:—West shaft sunk 13 feet 8 inches, total 52 feet 8 inches. It has been timbered and lagged for 23 feet, and collared up 10 feet. We have passed through about 12 feet of soft decomposed trap rock, and are now again in quartzite. As some falls have occurred, I shall have to timber and lag right down to solid ground. There are indications, too, that we shall soon get water. I have ordered hauling engine to arrive. Hauling by hand is now very slow, and progress will be much accelerated when machinery is erected. East shaft sunk 12 feet, total 48 feet. There is no change to report here. Formation hard quartzite, dipping west at 75°. Men's quarters are going up, as also compound.

MOUNT MAGNET.—The following fortnightly report has been received from the general manager, dated March 16: The developments on the 6 acres are opening up splendidly. To-day we are raising 3 ounce material. We have connected with the mullock pass from No. 1 shaft north, and we are now extending the drive towards the main shaft. This work is let on contract, and will be completed in about four weeks' time.

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (April 30):—The mine share market is without any change, and prices remain much the same. Tin firmer, with more confidence in a prospective advance on the favourable result of statistics for the month showing a further reduction on stocks. Quotations:—Basset Mines (fully paid), 1 to 1¼; ditto (5s. paid), 5s. to 6s.; Blue Hills, 1s. to 1s. 3d.; Carn Brea, 9s. to 10s. 6d.; Devon Consols, 1 to 1¼; Dolcoath (fully paid), 15s. 6d. to 16s.; ditto (7s. 6d. paid), 5s. to 6s.; East Pool, 2¼ to 2⅝; Killifreth, 6s. 6d. to 7s.; Levant, 4¼ to 4½; Polberro, 7s. 6d. to 8s. 6d.; Tincroft, 11s. to 12s. 6d.; West Kitty, 2 to 2¼; Wheal Grenville, 6¼ to 6½; Wheal Kitty, 4s. to 5s.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers and Mining Share Dealers, Redruth, write under date of April 30:—Very little doing in anything, and so long as tin continues under £80 it is useless to expect any activity. Quotations in most instances are nominal, and at the moment dealers will neither buy or sell. Quotations herewith:—Blue Hills, 1s. to 2s.; Basset Mines, ¼ to 1½; Carn Brea, ⅜ to ⅝; Dolcoath (fully paid), 14s. 6d. to 15s.; ditto (5s. paid), 3s. to 3s. 6d.; East Pool, 2⅜ to 2⅝; Killifreth, 6s. to 6s. 6d.; Polberro, ¼ to ½; South Crofty, ¼ to ½; Tincroft, ⅜ to ⅝; West Kitty, 2 to 2¼; Wheal Grenville, 5½ to 6; Wheal Kitty, ¼ to ½; Wheal Metal (3s. paid), 3s. 6d. to 4s.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market street, write, April 30 (noon):—Premising that home rails particularly and several other classes of home investments have further appreciated during the past week, we may simply proceed to daily details of alterations. On Friday last home rails moved, as a rule, only in small fractions, but these were on the upward side, whilst Scotch stocks are to the front with improvements of ⅛ to ¼. Americans quiet, but rather better on nominal quotations. The Mexican dividends (same as last year) put one or two of their issues down somewhat. Saturday, as usual, was quiet, and but for continued demand for Scotch deferred stocks, the market was without feature. Americans and Canadians kept figures firm, but without business more of a desultory character. On Monday the only real move was again on home rails, which, with a fair amount of business doing, marked better prices all round, with Great Northern A to the front with rise of about 2¼ per cent. Americans held their own, and Canadians strengthened a bit. Tuesday found something of a set-back, most home rails with Scotch stocks and Brighton A coming on for the largest fall. Americans began better coming higher from the other side, but without support here; they simply remained about as they were. Canadians just steady. Yesterday began rather on the lower side for home rails, but mended later, except for Midlands and Londons, which quoted fractionally lower. Americans and Canadians finish slightly easier, but later prices are better than the lowest of the day. This morning prices opened nominally about last evening's close, but they were merely nominal, and as soon as business was attempted prices showed some farther improvement. Consols have had a distinct fall from recent record points. Most other investment stocks better again. Other classes as described below:—

ENGLISH RAILWAYS.—Higher: Caledonians, 2¼; ditto Deferred, ¼; Great Northern A, 2½; Great Western, 1; Lancashire and Yorkshire, ½ to ⅝; Brighton A, ⅝ to 1; Chathams, ¼; London and North-Western, ½; Sheffield A, 1; Districts, ¼; North British Deferred, 2½; Berwicks, ⅜; South-Eastern Deferred, 2⅜.—Lower: Great Eastern, ⅜; Midland, ⅛.

AMERICAN AND CANADIAN.—Higher: Canadian Pacifics, ⅜; Trunk Guaranteed, ½; ditto First Preference, ¼ to ⅜; ditto Second Preference, ¼ to ½; Milwaukees, ⅜ to 1; Denvers, ½; ditto Preference, ¼; Ontarios, ½; Norfolk and Western Preference, ⅜; Atlantic First, ⅛.—Lower: Atchisons Ordinary, ⅜; ditto Income Bonds, ½; Mexican Ordinary, ⅜; ditto First Preference, 1⅜ to 2½; ditto Second Preference, 1; Central Pacifics, ¼; Erie, ½; Readings, ¼ to ⅜; Union Pacific, ⅜ to ½.

CONSOLS.—Lower: Two and Three-quarter per Cent., 1⅛.

COLONIAL STOCKS, &c.—Higher: Victoria Inscribed, ½.

CORPORATION STOCKS AND DEBENTURES.—Higher: Blackburn Three per Cent., 1 to 2; Bolton Three and a-Half per Cent., 1.

FOREIGNERS.—Higher: Argentine Six per Cent., 1¾ to 2; ditto Five per Cent., ½; Brazilian Four and a-Half per Cent., 1; ditto Four per Cent., ½; Egyptian Unified, ½; Russian Four per Cent., ½; Uruguay Three and a-Half per Cent., ½.—Lower: Italian Rentes, ¼; Turin D, ½.

BANKS.—Higher: Bank of Liverpool, ½; Consolidated, ½ to 3-16; Lancashire and Yorkshire, ½; Parr's and Alliance, ⅜ to 1½; Union of Manchester, ⅛ to ¼; W. D. and Manchester and Salford, ⅜ to ⅝.—Lower: Imperial Ottoman, ¼.

INSURANCE.—Higher: Liverpool, London, and Globe, ½; Royal, ¾ to 1; Thames and Mersey, ½; Union Marine, ¼ to ⅜.—Lower: London and Lancashire, ½; Manchester Fire, 5-16.

COAL, IRON, &c.—Higher: Bolckow (£20 paid), ¼; Ebbw Vales, 1-16 to ⅛.—Lower: Bolckow (£12 paid), ½; Sheepbridge A, ¼.

TELEGRAPHS AND TELEPHONES.—Higher: West and Brazilian, ½; ditto Preference, ½; ditto Deferred, ¼; National Telephone, 3-16 to 5-16.—Lower: Anglo-American Preference, ½.

BREWERIES.—Higher: Allsopp's, 6; Bent's, 1; Chester's, ⅜ to ½; Manchester, ½; Massey's, ½; Tamplin's, ½.

MISCELLANEOUS.—Higher: Armitage's, ½; Blackpool Tower, 2s.; ditto Winter Gardens, ½; Bovril, 1½; Coats Ordinary, 4; Cunard Steam, ⅜; Eastmans, ⅜; Henry's, 7-16; Howard and Bullough, ½; Kellner Partington, ⅜; Listers, ¾; Pacific Steam, 1⅜; Northern Assets, 6.—Lower: Liverpool Storage, ½; Sir J. Whitworth, ½; Gas Light "A," 1 to 2; Imperial Continental Gas, 1.

LATER (4 P.M.)—Business slow to-day in face of the closed day of to-morrow. Home rails mostly better, with Dover A and Metropolitan Districts to the fore. Canadians a little better. Americans nothing of consequence doing.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (April 30), writes:—During the past week the markets have advanced, notwithstanding the unsettled state of affairs in the Transvaal. Home trade prospects continue satisfactory, and the prices of metals are inclined to improve.

In shares of coal, iron, and steel companies, prices are generally better. Marbella are at 43s.; Nidduie, 41s.; Steel Company of Scotland, 98s.; and Stewart and Clydesdale, 11⅝.

In shares of copper concerns, prices have also improved. Arizona have touched 58s. 6d.; Tinto, 20⅝; and Tharsis, 116s. cum. div. The last-named shares are now dealt in ex div. at 5½. Copiapo Copper are at 41s. 3d.

In shares of gold and silver mines there has been a fair amount of business done. Chartered have fluctuated according to the news from Pretoria. The announcement that the leaders had been sentenced to death caused a drop to 65s., but there has been a slight recovery on the announcement that the sentence had been commuted to five years' imprisonment. Afrikander have improved on news from the mine that they have a plentiful supply of labour, and it seems likely the companies generally will have a better supply of labour soon. West Australians have been attracting more attention, as some more of the mines should soon announce crushings. The fluctuations in Consolidated Gold Fields, East Rand, and Randfontein have not been very severe. Broken Hill advanced to 10s. 6d., but declined to 10s. 6d. on the delay in announcing monthly dividend. It has since been announced at the usual 1s., although it is possible it may be reduced in future to pay for new plant. Western West United are at 27s. 6d.; African Recovery, 33s.; Australian Broken Hill, 1s. 6d.; Blue Spur, 8s. 9d.; Big Blow, 17s.; Charterland, 15s.; Crœsus South United, 45s.; Cassidy Hill, 22s. 6d.; Day Dawn P.C., 3s. 3d.; Doornkop, 5s.; Eastleigh, 22s. 6d.; Emma, 2s. 3d.; Gold Fields of Mozambique, 21s. 3d.; Graskop, 5s. 3d.; Gem of Cue, 2s. 9d.; Golden Crown, 60s.; Hainault, 33s.; Hauraki, 15s.; Hit or Miss, 35s.; Hall Mines, 31s. 3d.; Kapanga, 14s. 6d.; Kathleen, 4s. 3d.; Lisbon Berlyn, 6s. 3d.; London and Paris, 25s.; Mashonaland Agency, 45s.; Murchison New Chums, 9s.; Mallina, 2s. 6d.; Mawson's Reward, 11s. 3d.; Ouro Preto, 22s. 6d.; Orient, 9s. 6d.; Preece's Point, 4s. 9d.; Paddington Consols, 27s. 6d.; Rhodesia (Limited), 19s.; Rhodesian Mining and Finance, 22s. 6d.; Sheba, 43s. 6d.; St. Augustine, 8s. 9d.; Spes Bona, 32s. 6d.; Torva Exploring, 21s. 6d.; United Rhodesia, 15s. 6d.; Umtali, 6d.; Willoughby's, 36s.; Wentworth, 21s. 6d.; Wealth of Nations Extended, 21s. 3d.; and Zambesia Exploring, 52s.

In shares of miscellaneous companies the principal feature is an advance in oil companies' shares, owing to the improvement in the ammonia market, and the announcement of a dividend by Broxburn Oil at 7½ per cent., which compares with 5 per cent. last year. Broxburn have improved to 11, Pumpherston to 7⅜, and Young's to 37s. The Nobel Dynamite dividend is also announced at 13 per cent., which compares with 10 per cent. last year, and the shares have improved to 18.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of April 30:—A very considerable business has been transacted during the past week. Home railways have advanced. Caledonian Deferred has risen from 62 to 63 3-16, North British from 47⅞ to 50 1-16, Glasgow and South Western from 129 to 130½, Great North of Scotland from 114 to 116, Highland from 104 to 104⅜. Insurance shares have been in request at higher prices. North British and Mercantile have improved from 41½ to 41¾, Liverpool, London, and Globe from 5⅛ to 5⅛, Northern from 72¾ to 73½, Royal from 5⅛ to 5⅛, Scottish Accident from 47s. 6d. to 48s., Thames and Mersey Marine from 11 11-16 to 12. In banks, Commercial have risen from 75½ to 76½, Town and County from 20 3-16 to 21 11-16. Royal has receded from 229½ to 228½. British South Africa shares have improved from 68s. to 70s. Fife coal shares have risen from 17½ to 17⅝. Arizona Copper have improved from 55s. 3d. to 57s. 9d., Rio Tinto from 18⅞ to 20½. Oils have advanced—Broxburn from 10 3-16 to 10 9-16, Dalmeny from 16½ to 17, Hermond from 9d. to 1s., Linlithgow from 23s. to 24s., Pumpherston from 7½ to 7⅜, Youngs from 33s. 3d. to 37s. Distillers have risen from 20⅝ to 21½, Coats from 35½ to 38⅜. Union Steamship of New Zealand have fallen from 7 13-16 to 7⅝.

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Extracts and Notes from Mining Operations and Reports on these during the past 25 years.

By WILLIAM GUTHRIE BOWIE.

(*Continued from page 540.*)

IT will not be necessary to give in detail the costs of the different works, or describe them in their operations, or the profits and losses to be made by some of the new processes, while as to the export of pyrites it may also be sufficient to state that a profit on the export of this is obtained, and that this profit can be further increased by economies in mining and treating the ore.

In all the foregoing we find fields for improvements that can effect a saving of copper in treating the ore, its cementation and reduction to pure copper, and these the future must develop, and hence such savings must go far to sustain these mining companies.

It will likewise be unnecessary to describe the works, plant, &c., or the metallurgical operations in smelting, &c., their arrangements or costs; it may, however, be worth while mentioning that when it was proposed to introduce Holloway's process in 1878, it was estimated that the erection of plant to treat 300,000 tons of pyrites per annum would cost at least £150,000, and that a profit could be obtained from a 1½ per cent. Cu. pyrites of £165,000, if 300,000 tons of ore were treated, this being equal to a clear profit of 11s. per ton of ore (see paper read to Society of Arts and Discussions, &c., February 12, 1879, and *Iron* of the same year.) Since then others have improved this process, and it is largely in use, but chiefly destroying sulphur to recover the iron, copper, &c., in other parts of the world (see *The Mining Journal*, lectures by Mr. Douglas, referred to), and notes as to having been probably used by the Romans. The chemical formulæ as to the constituents of this ore need not be given, or those showing the reactions in calcination or other treatments to recover their constituents, as, firstly, able authors are numerous and available for all to study who treat all these most exhaustively; secondly, these are never strictly correct in practice with materials containing such a variety of substances and combinations; and, lastly, the use of such in papers such as this generally have no other object than to indicate as being technical, while the majority of mine shareholders who read them see in them simply a series of incomprehensible hieroglyphics.

Now that new processes are being adopted and introduced, these should be superintended by the most practical, energetic, and skilled professors of mining, chemistry, and metallurgy; at least the largest companies will find it worth while to do so, and can afford to remunerate them, as they are well worthy of it; and handsomely too, so as to encourage them to new discoveries, and if these are further backed by better arrangements that should be made, where the mines are acquired by royalties on the ton of ore or copper produced, or in other cases where they are so unnecessarily burdened with excessive nominal capitals, or with debenture debts, and the heavy interest paid for these and their repayment. Certainly the favourable moment to make new arrangements has been lost, but owners receiving royalties or excess of shares, or holders of debentures, can take examples from Tharsis Company; and those with shares from that of Santo Domingo, and both those, whether receiving royalties, or interest for debentures, will see by the success of Tharsis Company that in these mines they gain more by being shareholders than what their other holdings produce them, and it is evident that, seeing the difficulties they would have, even if handed over the properties, every reason is in favour of their also being safer, and receiving greater benefits in the future if they were shareholders. These mines can no longer afford the royalties and high debenture interest paid in the past, and contracted when all these mines were doubly richer in copper, and the value of this metal, sulphur, &c., were double that now obtained, or likely to be obtained.

Economy is practised in everything, and there must be some of this observed likewise in royalties and debenture interests, and each should arrange at once to extinguish these charges by some of the plans found so beneficial to all by others who have so wisely reformed these matters in time. While the Government, instead of increasing the local taxes, mining dues, import and export duties on the necessary material introduced or ore exported, should also see that it is to its own benefit and the country in general. These should be relaxed as much as possible, and, if all this can be accomplished, then these mines will be in a position to triumph over the difficulties now surrounding them and others they may meet in the near future. Spaniards should remember their own proverb—"That it takes a gold mine to work a lead one."

There is one matter that may be noted in respect of companies exploiting these mines—and it is, they have always been free of the manipulations of the shady company promoters that sprung into life and force in all European countries a few years ago, and whose operations have been qualified as "fine art" by some, and as a "new religion replacing that of old monastic times" by others, whose offices were "monasteries," Chairmen "the abbots," directors "the monks," and their experts "the modern friars," as they scattered themselves all over the world, and who combined to exploit the mineowner and public—their humble "flock." While the miners and their woes, who seemed to hinder their operations, were the "heretics" and subjects of their malediction, whose "democratic spirit" they fained to exorcise from their bodies *bon gre, mal gre*. But these ancient monks did good in their time, and preserved the arts and learning of their times for our uses to-day, while these promoters have caused much ruin to others and will ever be remembered as "sharps." Thus there are no elements that can disturb steady progress here, not even the useful "democratic devils or spirits" referred to, as a better or steadier miner is not found anywhere than those employed in these mines.

It will be observed from the dividends paid by the companies best known to the public that the estimations made are fairly approximate to the costs and returns of copper, &c., realised in the largest mines during the past period of exploitation, especially as to mining expenses previous to recent economies in these; and it will also be observed that the profits realised by them since copper and sulphur fell to their lowest figures in value are also approximate to the general averages given as those derived in the past, and by these comparisons it will be fully evident that great neglect has taken place in adopting new processes, while all who have written on this subject are at one as to this unaccountable hesitation to adopt the evidently superior processes used by others both here and in other lands. (See *The Mining Journal*, May 18, 1895, page 571. Lectures of Mr. Douglas.)

(*To be continued.*)

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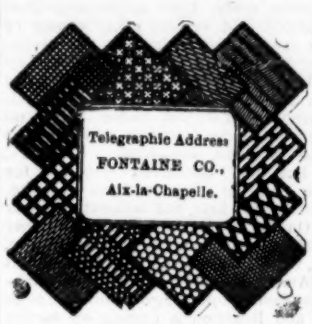

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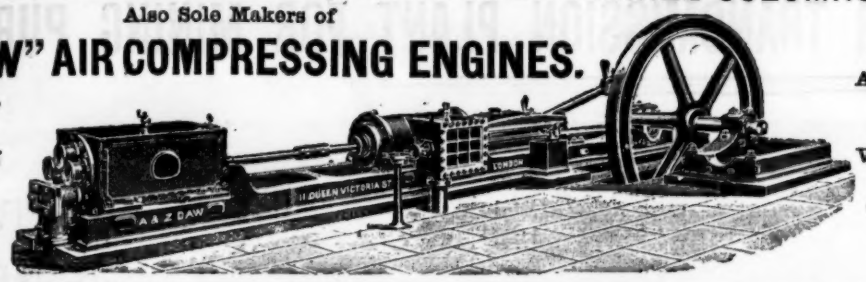

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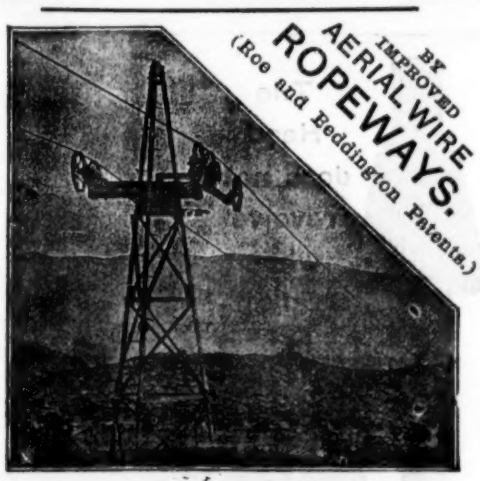

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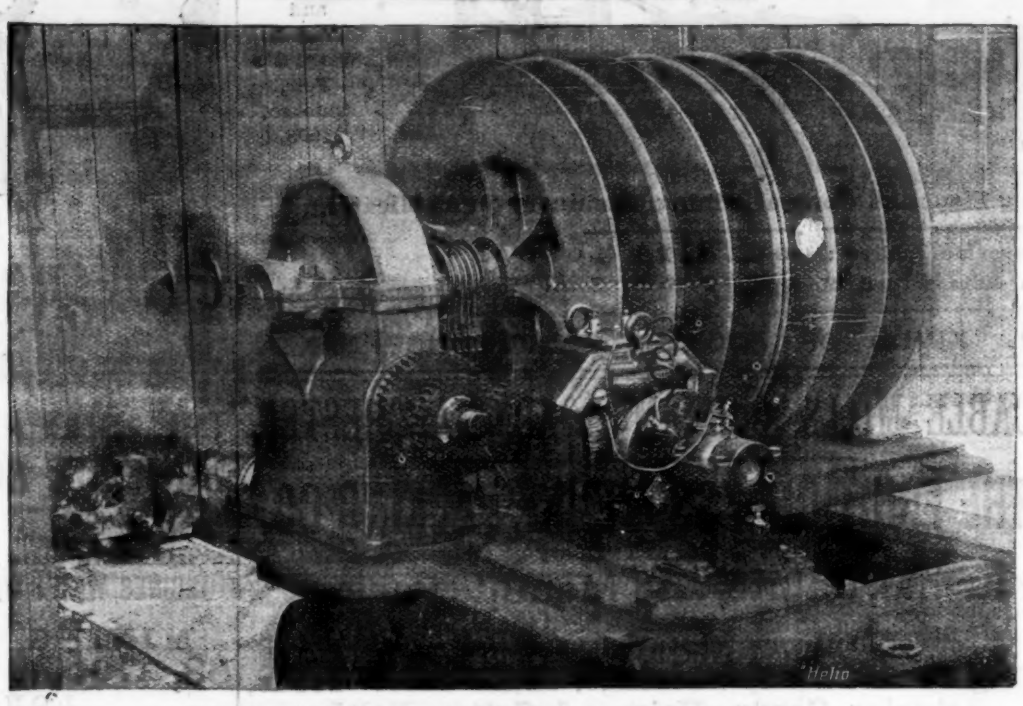

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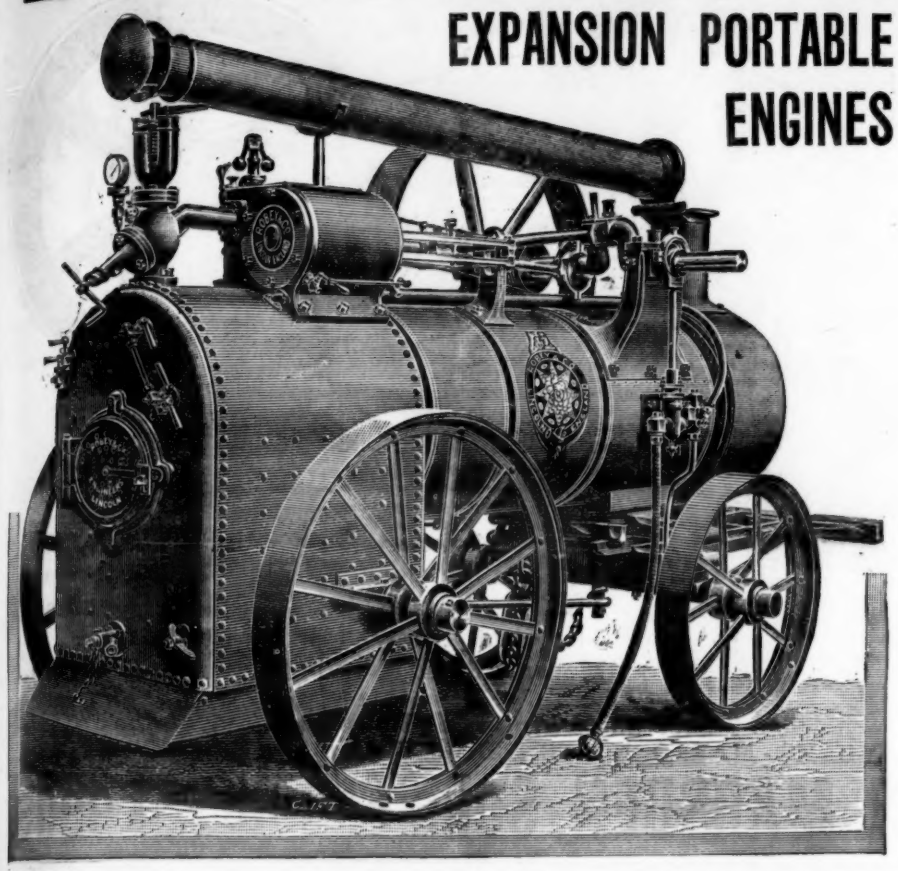

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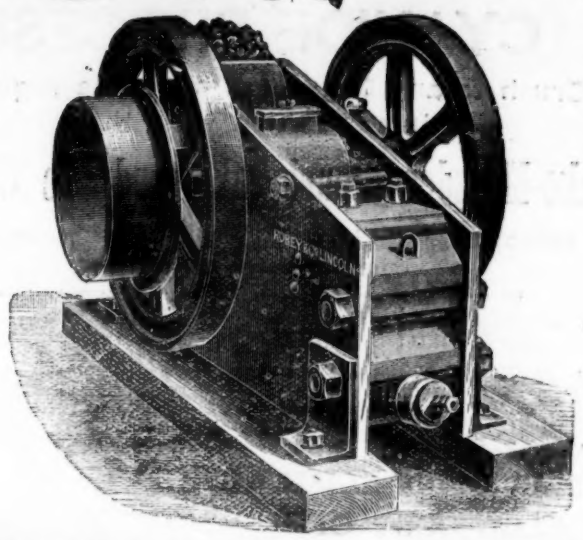

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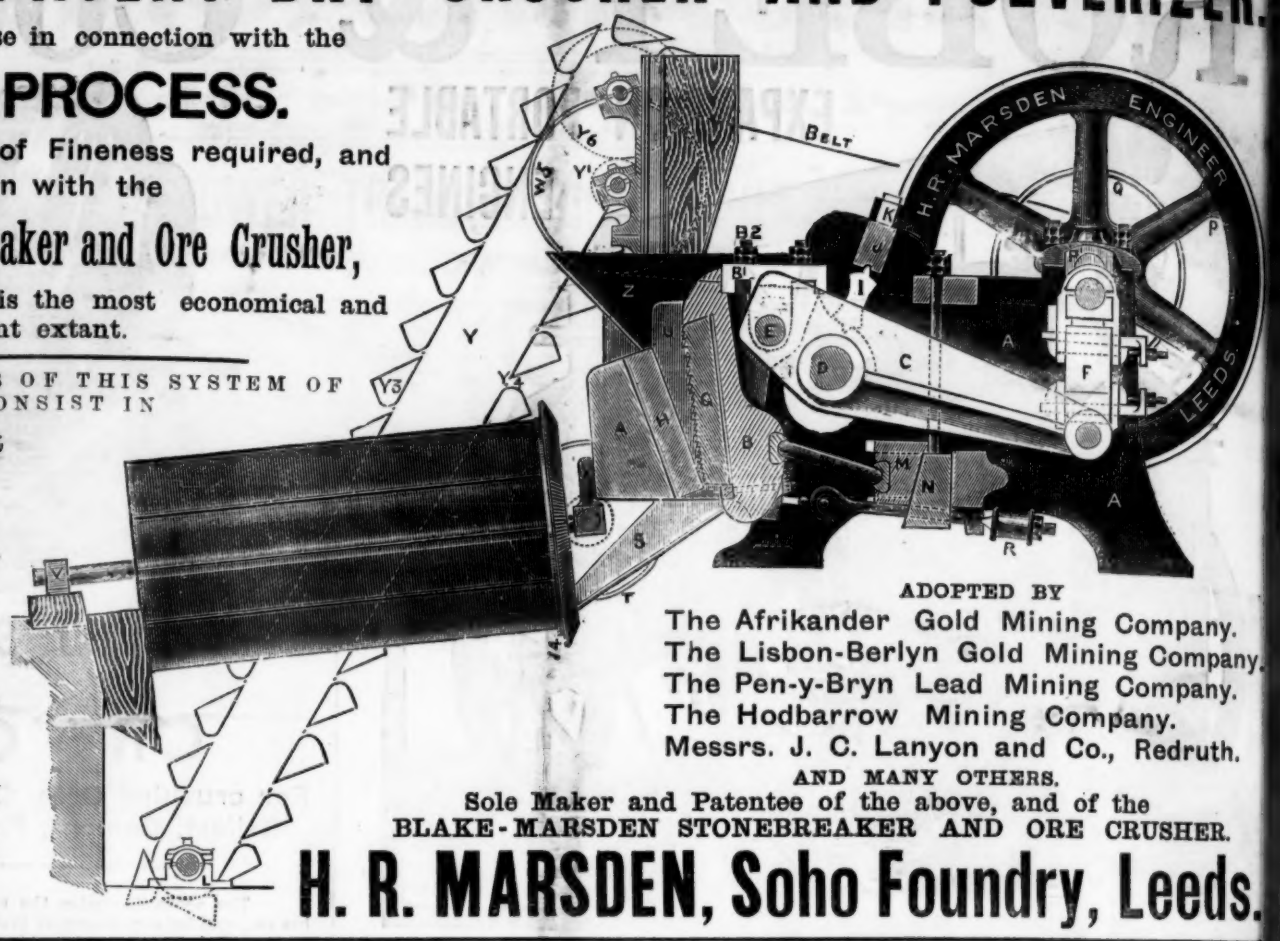

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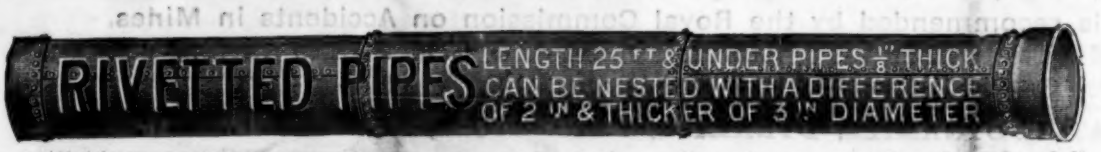

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